

NEW APPLICATION

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

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JIM O'CONNOR

SANDRA KENNEDY

JUSTIN OLSON

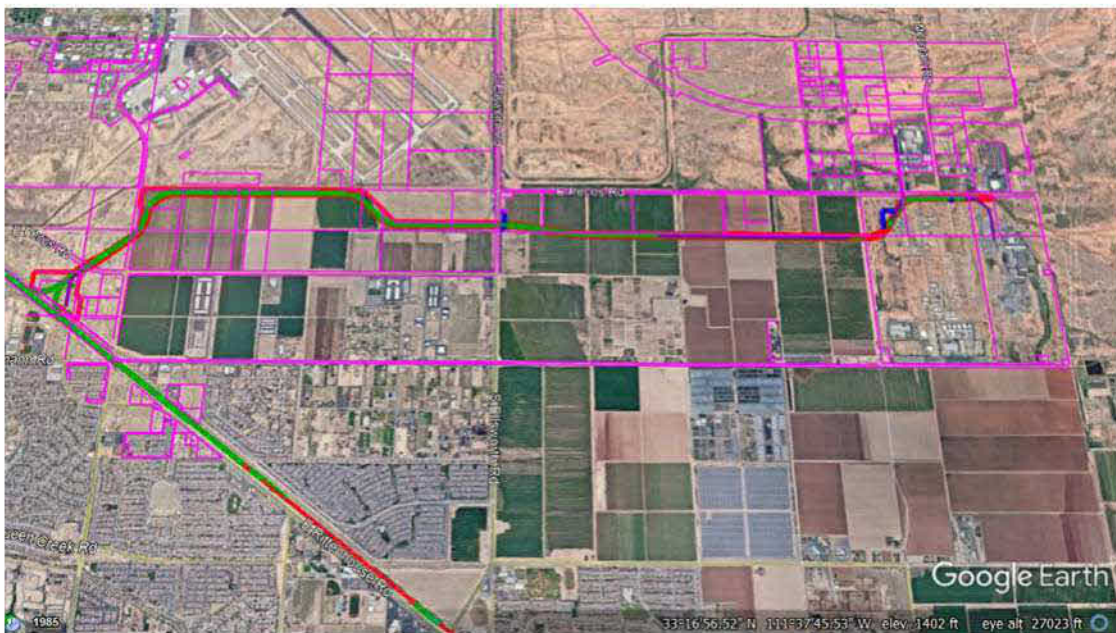
ANNA TOVAR

)	DOCKET NO.
)	_____
IN THE MATTER OF THE)	
APPLICATION OF UNION)	
PACIFIC RAILROAD TO CONSTRUCT)	UNION PACIFIC RAILROAD
FIVE (5) NEW AT-GRADE CROSSINGS)	COMPANY'S APPLICATION FOR
AND IMPROVE ONE (1) EXISTING AT-)	AUTHORITY TO CONSTRUCT
GRADE CROSSING IN MESA, ARIZONA)	FIVE (5) AT-GRADE CROSSINGS
)	AND IMPROVE ONE (1) EXISTING
)	AT-GRADE CROSSING IN MESA,
)	ARIZONA
)	

Applicant Union Pacific Railroad Company ("Union Pacific"), whose post office address is 1255 South Campbell Avenue, Tucson, Arizona 85713, by and through its attorneys Beaugureau, Hancock, Stoll & Schwartz, P.C., pursuant to A.A.C. R14-3-106(F) and R14-3-107 and A.R.S. § 40-337(B)(2), hereby applies for authority to construct five (5) new public at-grade crossings at Ellsworth Road, DOT #980-160S; Pecos Road, DOT #980-158R; Sossaman Road, DOT #980-159X; Crismon Road, DOT #980-161Y; and Signal Butte Road, DOT #980-163M; and for authority to improve one (1) existing public at-grade crossing located at Sossaman Road, DOT #741-834B, as part of Union Pacific's proposed PIRATE Line. The PIRATE Line will provide rail service to existing and newly-developed industries in the East Valley, and open up competitive advances to new businesses actively relocating to the area.

I. THE PECOS INDUSTRIAL RAIL ACCESS AND TRAIN EXTENSION (“THE PIRATE LINE”) PROJECT

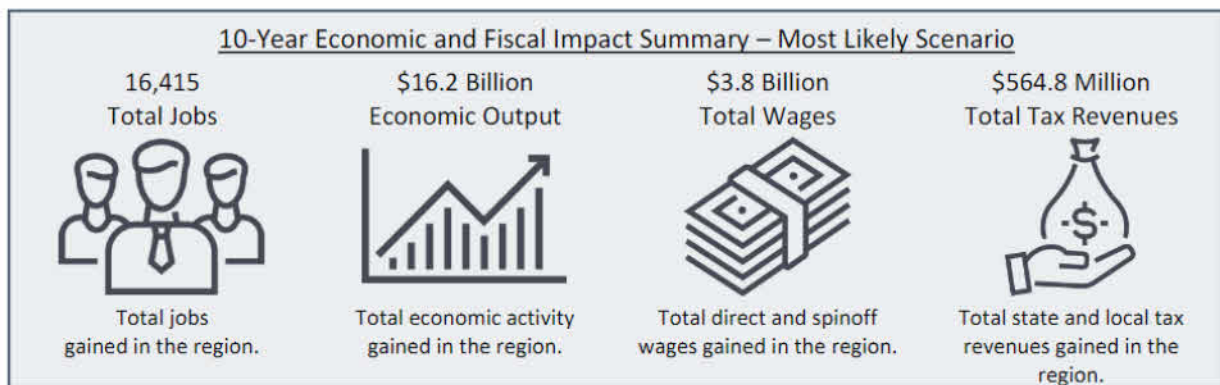
Union Pacific requests permission from the Arizona Corporation Commission to construct five (5) new at-grade crossings at the locations referenced above, and modify one (1) existing at-grade crossings as part of Union Pacific’s proposed PIRATE extension line in Mesa, Arizona (“the PIRATE Line”). The proposed PIRATE Line would connect newly-developed industries in the East Valley to Union Pacific’s rail network. The PIRATE Line would run from Union Pacific’s mainline, near Rittenhouse Road, to Pecos Road, generally running in an east-west direction, terminating near Meridan Road. A GoogleMap showing the proposed alignment for the PIRATE Line is contained below. The PIRATE Line is identified in red.



The PIRATE Line is located entirely within the City of Mesa, and runs south of Phoenix-Mesa Gateway Airport for approximately six (6) miles. Union Pacific, the City of Mesa, and other stakeholders have been working on the PIRATE Line, following

increased interest from the East Valley business community for industrial rail service. The City of Mesa has repeatedly expressed its support for the PIRATE Line project.

The City of Mesa applied for a 2020 BUILD Grant, and recently applied for a RAISE Grant to support the project. A copy of the City of Mesa’s 2022 RAISE Grant Application is attached hereto as “Exhibit 1”. As part of its RAISE Grant Application, the City of Mesa noted that the PIRATE Line would have a significant positive economic impact on the East Valley region. In 2021, the City of Mesa’s consultant, Rounds Consulting Group, Inc., provided the following 10-year Economic and Fiscal Impact Summary forecast for the project¹:



Source: IMPLAN; Rounds Consulting Group, Inc.

Union Pacific has already secured an anchor tenant for the PIRATE Line Project, CMC Steel Arizona. CMC Steel Arizona recently broke ground on a new “micro-mill” in Mesa, Arizona, which would be served by the proposed PIRATE Line. CMC Arizona describes its new Mesa facility, on its website, as follows:

CMC Steel Arizona is already one of the most advanced and sustainable steelmaking facilities in the world. The expansion is CMC’s 3rd EAF micro-mill, and **the world’s first** capable

¹ These estimates were updated in the City of Mesa’s 2022 RAISE Grant Application for the Pecos Industrial Rail Access and Train Extension Project.

1 of producing merchant bar projects (angles, channels, flats,
2 rounds, and squares) in an energy-efficient, continuous
3 casting process.²

4 Union Pacific's PIRATE Line would help CMC Steel Arizona transport raw/source
5 materials from its suppliers and vendors and provide an efficient way to transport its
6 finished goods to domestic and foreign markets.

7 In its RAISE Grant Application, the City of Mesa estimates that the PIRATE Line
8 would take approximately 29,000 truckloads off the City of Mesa' roadways each year,
9 allowing rail customers to transport their products and materials without significantly
10 increasing truckloads on neighboring city streets coming to and from their facilities.

11 At this time, Union Pacific anticipates that it would run one (1) local industrial
12 train per day, traveling each direction, on the PIRATE Line, five (5) days a week, with an
13 average carload of 32 cars per train. Union Pacific does not anticipate regularly
14 conducting switching operations over any of the proposed new or modified crossings,
15 limiting the amount of roadway delay caused by train traffic on the proposed PIRATE
16 Line.
17

18 **II. PROPOSED AND IMPACTED AT-GRADE CROSSINGS**

19 Union Pacific requests authority to construct five (5) new at-grade crossings as
20 part of the PIRATE Line Project. Union Pacific's Schematic Plan and three (3) Plan
21 Overview drawing are collectively attached as "Exhibit 2." These drawings show the
22 general layout of the PIRATE Line, and the location of the proposed at-grade crossing
23
24

25 _____
26 ² https://jobs.cmc.com/content/CMC-Steel-Arizona-2nd-Micro-Mill/?locale=en_US
(Emphasis in original).

1 improvements. Below is a brief description of the existing roadways at each proposed
2 crossing location.

3 **A. Ellsworth Road (DOT No. 980-160S)**

4 Ellsworth Road is an existing north-south four-lane road in Mesa, Arizona. This
5 Application seeks to widen Ellsworth Road from four (4) to six (6) lanes with a center
6 median, and pedestrian sidewalks east and west of the roadway. Union Pacific will also
7 construct an at-grade crossing through Ellsworth Road with one (1) track running through
8 it in an east-west direction. The Ellsworth Road at-grade crossing would be equipped
9 with Union Pacific's state-of-the-art cantilevers, lights and gates, pavement markings,
10 and appropriate signage, all consistent with the requirements of the Manual of Uniform
11 Traffic Control Devices ("MUTCD"). Union Pacific would also install off-quadrant
12 flashers adjacent to the sidewalks to serve as an additional warning device for
13 pedestrians. The roadway widening and sidewalks are consistent with the City of Mesa
14 Development Standards. A copy of Union Pacific's plans for the proposed at-grade
15 crossing at Ellsworth Road are enclosed herein as "Exhibit 3."

16 **B. Pecos Road (DOT No. 980-158R)**

17 Pecos Road is an existing two-lane road that runs east to west through Mesa,
18 Arizona. Union Pacific proposes widening Pecos Road from two (2) to four (4) lanes,
19 installing a center median, and adding sidewalks north and south of the roadway. Union
20 Pacific will have one (1) track running through the proposed at-grade crossing at Pecos
21 Road. The Pecos Road at-grade crossing would be equipped with state-of-the-art lights
22 and gates, pavement markings, and signs would be installed per MUTCD standards.
23
24
25
26

1 Union Pacific would further install off-quadrant flashers adjacent to the sidewalks to
2 serve as an additional warning device for pedestrians. The roadway widening and
3 sidewalks improvements proposed by Union Pacific are consistent with the City of Mesa
4 Development Standards. A copy of Union Pacific's proposed plans for the at-grade
5 crossing at Pecos Road are enclosed herein as "Exhibit 4."

7 **C. Sossaman Road (DOT No. 980-159X)**

8 Sossaman Road is an existing north-south two-lane road in Mesa, Arizona. Union
9 Pacific proposes widening Sossaman Road from two (2) to four (4) lanes, and installing a
10 center median and sidewalks. Union Pacific would construct an at-grade crossing with
11 one (1) track running through it. The Sossaman Road at-grade crossing would be
12 equipped with state-of-the-art lights and gates, new pavement markings, and signs that
13 are compliant with the MUTCD. Union Pacific would further install off-quadrant flashers
14 adjacent to the sidewalks to serve as an additional warning device for pedestrians. Union
15 Pacific's proposed roadway widening and sidewalks at Sossaman Road are consistent
16 with the City of Mesa Development Standards. A copy of Union Pacific's proposed at-
17 grade crossing improvements at Sossaman Road are enclosed herein as "Exhibit 5."

20 **D. Crismon Road (DOT No. 980-161Y)**

21 Crismon Road is an existing north-south three-lane road in Mesa, Arizona. Union
22 Pacific's crossing improvement application would add a center median in place of the
23 roadway's center lane. Union Pacific would also add sidewalks, and construct an at-
24 grade crossing with two (2) tracks running through it. The Crismon Road at-grade
25 crossing would be equipped with state-of-the-art lights and gates, pavement markings,
26

1 and signs that are compliant with current MUTCD standards. Union Pacific would also
2 install an off-quadrant flasher adjacent to the sidewalk to serve as an additional warning
3 device for pedestrians. The roadway widening and sidewalk are consistent with the City
4 of Mesa's Development Standards. A copy of Union Pacific's proposed at-grade crossing
5 improvements at Crismon Road are enclosed herein as "Exhibit 6."

7 **E. Signal Butte Road (DOT No. 980-163M)**

8 Signal Butte Road is an existing north-south two-lane road in Mesa, Arizona.
9 Union Pacific's proposed crossing improvements would include constructing an at-grade
10 crossing with one (1) track running through it. The Signal Butte Road at-grade crossing
11 would be equipped with state-of-the-art lights and gates, new pavement markings, and
12 signs that are compliant with applicable MUTCD standards. A copy of Union Pacific's
13 proposed at-grade crossing improvements for Signal Butte Road (DOT No. 980-163M) is
14 enclosed herein as "Exhibit 7."

16 **F. Sossaman Road (DOT No. 741-834B)**

17 Union Pacific's crossing improvement application requests authority to modify
18 one (1) existing at-grade crossing in Mesa, Arizona. Sossaman Road (DOT No. 741-
19 834B) is an existing north-south two-lane road with an at-grade crossing through it in a
20 northwest to southeast direction. The existing at-grade crossing is equipped with lights
21 and gates.
22

23 Union Pacific proposes adding a second track through the existing crossing at
24 Sossaman Road. As part of the PIRATE Line Project, Union Pacific would replace the
25 crossing's existing lights and gates to accommodate the second track, and replace them
26

1 with state-of-the-art lights and gates. Pavement markings and signs would be also be
2 updated per current MUTCD standards. A copy of Union Pacific's proposed
3 modifications for Sossaman Road (DOT No. 741-834B) is enclosed herein as "Exhibit
4 8."

6 **III. IMPROVEMENT APPLICATION SUPPORT**

7 The reasons for this Application follow, supported by the Declaration of Western
8 States Public Project Manager Ken Tom, attached hereto as "Exhibit 9." Mr. Tom states:

9 1. In recent years, the public's demand for rail freight service to, from and
10 through Arizona, and in the Southwest generally, has grown steadily and dramatically.
11 Union Pacific anticipates that the public's demand for rail freight services will continue to
12 grow in Arizona.

13
14 2. To meet this growing public demand for movement of freight by rail, Union
15 Pacific, along with relevant municipal, business and industry leaders, determined that the
16 PIRATE Line would provide significant economic benefits to the East Valley region by
17 connecting the East Valley to Union Pacific's Arizona rail system and the United States'
18 National Rail Network.

19
20 3. The addition of the PIRATE Line will allow for the expeditious movement of
21 freight by rail through the East Valley, and through the State of Arizona.

22 4. Five (5) new at-grade railroad crossings will be constructed as part of the
23 PIRATE Line Project. (See, Exhibits 1 through 7 to Union Pacific's Application, submitted
24 herewith). One (1) existing public at-grade crossing will be upgraded as part of the
25 PIRATE Line Project. (See, Exhibit 8 to Union Pacific's Application submitted herewith).
26

1 The traffic delays associated with these new and upgraded crossings will be minimal
2 because Union Pacific 1) only has current plans for one train each direction per weekday;
3 and 2) does not plan on conducting regular switching operations over the proposed or
4 existing crossings. The proposed PIRATE Line will also take a significant number of
5 semi truckloads off of the City of Mesa's streets each year by providing East Valley
6 industries the opportunity to transport their materials and products via rail.
7

8 5. Specifically, Union Pacific seeks authority to construct five (5) new at-grade
9 crossings in the City of Mesa and improve one (1) existing crossing where public roadways
10 would intersect at grade with Union Pacific's proposed PIRATE Line. The new crossings
11 would intersect Sossaman, Pecos, Ellsworth, Crismon and Signal Butte Roads. The
12 proposed improvements to these new at-grade crossings have been evaluated by a
13 diagnostic team consisting of Union Pacific, the Arizona Corporation Commission's
14 Railroad Safety Staff, and the City of Mesa, which is the controlling roadway authority.
15

16 6. As part of the PIRATE Line Project, Union Pacific proposes modifying one
17 (1) existing at-grade crossing at Sossaman Road (DOT No. 741-834B). The proposed
18 modifications to Sossaman Road will enhance safety at this existing at-grade crossing by
19 incorporating the most current industry at-grade standard safety devices into the crossing.
20 Union Pacific will also be incorporating state-of-the-art at-grade crossing technology at
21 each of the five (5) new proposed crossing in Union Pacific's Application.
22

23 7. Enclosed with Union Pacific's Application, and incorporated by reference
24 here, are eight (8) Exhibits, one for each of the six (6) crossings impacted by this
25 Application, identified by the names of the crossings: Ellsworth Road, DOT No. 980-160S;
26

1 Pecos Road, DOT No. 980-158R; Sossaman Road, DOT 980-159X; Crismon Road, DOT
2 No. 980-161Y; Signal Butte Road, DOT No. 980-163M; and Sossaman Road (existing),
3 DOT No. 741-834B. Exhibits 3-8 contain the at-grade crossing improvements proposed
4 by Union Pacific. The remaining two (2) exhibits, Exhibits 1 and 2, contain additional
5 information regarding the PIRATE Line Project generally.
6

7 8. Union Pacific will bear the cost of all improvements to be made at the
8 crossings affected by this Application.

9 **IV. CONCLUSION**

10 For the foregoing reasons, Union Pacific respectfully applies to the Commission for
11 authority to improve, at Union Pacific's own cost, the foregoing public grade crossing at
12 Sossaman Road, DOT No. 741-834B, and authorize the creation of five (5) new at-grade
13 crossings as specified herein.³
14

15 RESPECTFULLY SUBMITTED this 15th day of November, 2022.

16
17 BEAUGUREAU, HANCOCK,
STOLL & SCHWARTZ, P.C.

18 By: /s/W. Reed Campbell
19 W. Reed Campbell
20 302 East Coronado Road
21 Phoenix, Arizona 85004
22 Attorneys for Applicant Union
23 Pacific Railroad Company
24

25 ³ By submitting this Application, Union Pacific does not waive its rights with respect to
26 any lack of jurisdiction or authority of the Arizona Corporation Commission, including,
without limitation, the right to assert federal preemption.

1 I hereby certify that I have this day served the foregoing documents on all parties of record
2 in this proceeding by mailing/emailing a copy therefore properly addressed with first class
3 postage prepaid to:

4 Docket Control
5 Arizona Corporation Commission
6 1200 West Washington Street
7 Phoenix, Arizona 85007

8 Ken Tom, Western States Public Projects Manager
9 Union Pacific Railroad Company Engineering
10 9451 Atkinson Street
11 Roseville, CA 95747

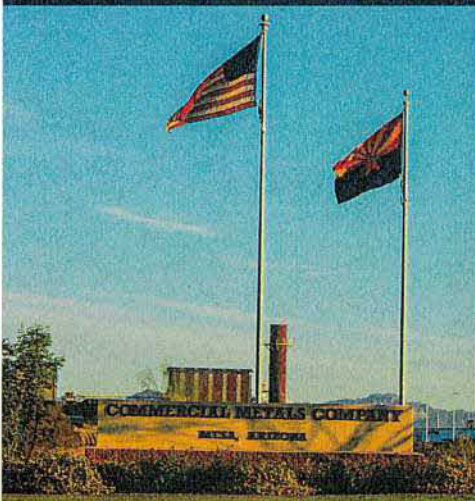
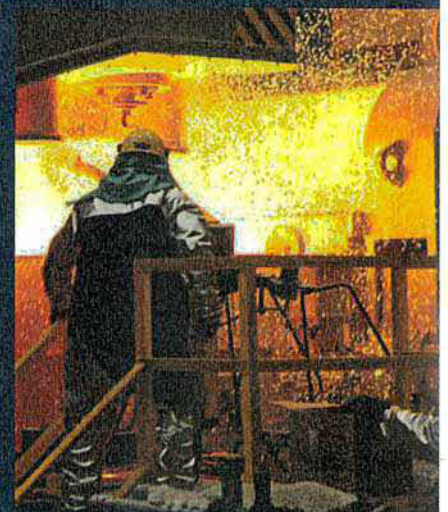
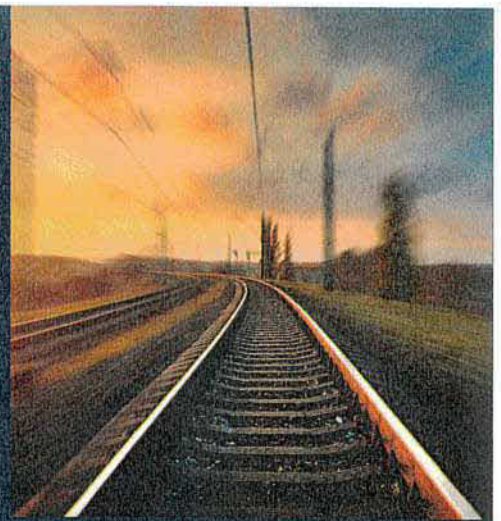
12 Robin Mitchell, Director
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/s/Lori Curry
Lori Curry

EXHIBIT "1"



PECOS INDUSTRIAL RAIL ACCESS AND TRAIN EXTENSION PROJECT

2022 RAISE Grant Application

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I AN OPPORTUNITY FOR SUSTAINABLE GROWTH

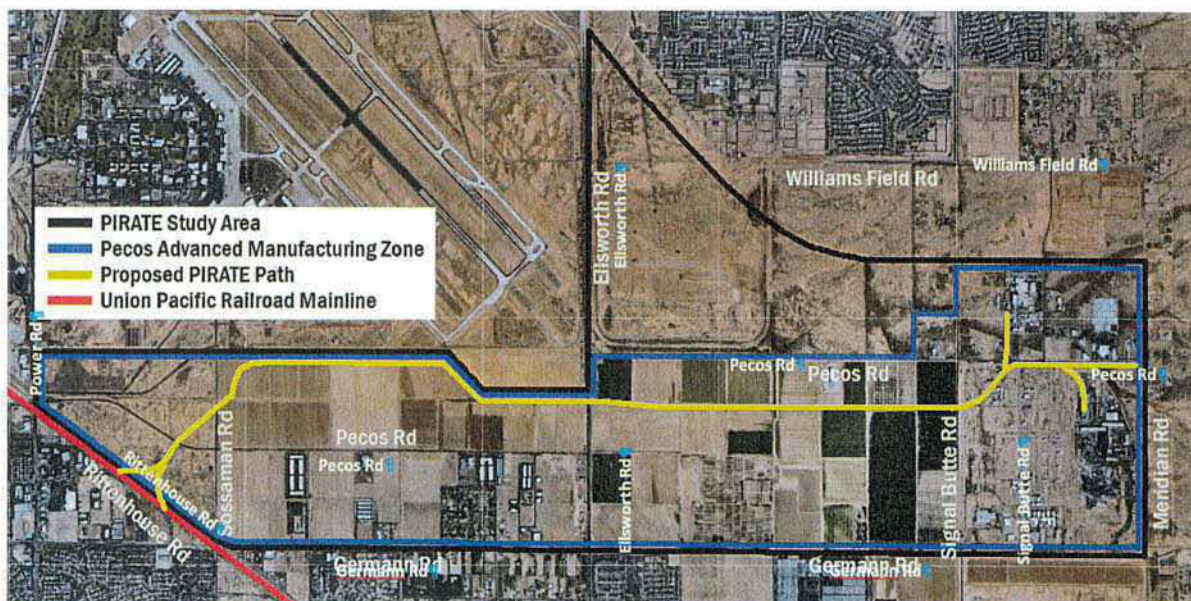
The Pecos Industrial Rail Access and Train Extension (PIRATE) Project is a public/private opportunity to invest in American high-skilled manufacturing jobs while reducing greenhouse gas emissions and local air pollution by diverting over 29,000 truckloads off U.S. highways and local roadways each year. The PIRATE Project is a new six-mile industrial rail branch in southeast Mesa, Arizona that will serve the transportation and logistics needs of existing businesses and open up competitive advantages to new businesses actively relocating to the area.

The City of Mesa, local manufacturing businesses, Union Pacific Railroad, the City of Phoenix, and a full suite of other public and private entities have joined together to help make this project a reality. This project will enable the Pecos Advanced Manufacturing Zone (PAMZ) to become a global leader in high-skilled technical manufacturing while concurrently providing far-reaching public benefits by transferring industrial materials away from public roadways and onto rail. Locally, the project will drive economic growth, expand high-skilled manufacturing job creation, and reduce congestion associated with long-haul trucking in Maricopa County, Arizona in a way that is consistent with the City of Mesa's 2021 Climate Action Plan for a Sustainable Community. The project will provide additional far-reaching public benefits to the southwestern region of the United States by reducing greenhouse gas emissions, local air pollution, highway maintenance costs, and congestion.

The PIRATE Project area, shown in Figure 1 below, encompasses approximately 4,800 acres of industrial land adjacent to the Phoenix-Mesa Gateway Airport.

FIGURE 1 Project PIRATE Location and the Pecos Advanced Manufacturing Zone (PAMZ)

SOURCE: PIRATE Project; City of Mesa; Google Maps



A | TRANSPORTATION INFRASTRUCTURE TO ADDRESS REGIONAL GROWTH

Mesa, Arizona is a growing economically vital region. Employment within the PAMZ is expected to grow from 1,921 in 2020 to 15,939 by 2050 (an increase of 14,018 jobs). Even without existing direct rail access, the project area has seen remarkable growth and is home to companies involved in the manufacturing of chemicals, metals, plastics, rubber, and electrical equipment. In addition to the heavy industrial and manufacturing uses already underway, the area features over 3,000 acres of undeveloped land that is shovel-ready with existing connections to power, water, sewer, natural gas, and zoning entitlements. In fact, the last 18 months has brought an unprecedented surge of new growth and industrial development to the PAMZ. The PAMZ now has over 30 different active industrial & manufacturing development projects in design or under construction, representing over 16.5 million square feet of new industrial and commercial square feet. This rapid growth will bring robust employment opportunities but has also accelerated the need for creative transportation and traffic mitigation solutions. The PIRATE rail line is one such solution. By expanding rail service into the PAMZ now, we are able to address tomorrow's challenges today and stay ahead of the oncoming wave of increased truck traffic and congestion as a result of the area's industrial, commercial and residential growth.

The City of Mesa is also doing it's part to take a proactive approach in infrastructure investment and is also investing over \$25 million in constructing and widening two critical arterials, Signal Butte Road and Ellsworth Road, over the next several years. This is aimed to align with the extension of the State Route 24 freeway project led by the Arizona Department of Transportation, which will be complete by the fall of 2022. These additional infrastructure investments complement the value PIRATE will bring to the area as well as deploying a multi-faceted approach to solving the area's dire traffic and logistics needs.

Currently, all of the existing industrial companies in the PAMZ rely on trucks to transport both manufacturing inputs and final products. Over 6,100 trucks come and go from the area each month, carrying heavy recycled steel, recycled rubber, and isotainers holding hazardous chemicals. Many of these trucks travel on local surface streets and on to Interstate 10 to reach their final destinations throughout the United States. Existing congestion on interstates I-17 and I-10 already causes unnecessary idling, emissions, and time lost. The PIRATE project can ensure that the ongoing economic growth in Mesa aligns with the city's goal to reduce carbon emissions from vehicle transportation and improve air quality.

B | SUPPORTING THE DOMESTIC SUPPLY CHAIN FOR SEMICONDUCTORS, RECYCLED CONSTRUCTION MATERIALS, & AUTOMOTIVE TECHNOLOGY

The PAMZ is a dynamic high-demand industrial area whose firms serve a critical need in domestic industrial manufacturing. From the semiconductor supply chain, recycled construction materials, and automotive technology, firms in the PAMZ are a vibrant and central component of U.S. infrastructure. Furthermore, many of the firms in the PAMZ are doubling down on their investments and are seeking to expand their production capacity as a result of rail access.

Semiconductor Supply Chain

Arizona and the Greater Phoenix area have become a hotbed for semiconductor manufacturing, with Taiwan Semiconductor Manufacturing Company (TSMC) locating a \$12 billion chip plant in North Phoenix, Intel announcing a \$20 billion expansion of their facilities in Chandler, LG investing \$2.8 billion in a new facility in nearby Queen Creek, and other critical semiconductor suppliers, like JX Nippon announcing the construction of a new 960,000 SF sputtering target campus within the PAMZ. These companies all recognize the importance of the agglomeration of talent and manufacturing inputs that currently exist in the region. **The following firms in the PAMZ are a central part of this supply chain, and are critical in addressing the ongoing semiconductor chip shortage.**

FUJIFILM

The **FUJIFILM Electronic Materials** facility in Mesa produces chemicals that support the semiconductor production process. With this project FUJIFILM could reduce truck traffic on the road by as much as 25%. FUJIFILM's need for rail service has existed since the construction of the site in 1995. The company has invested over \$100 million in this site and the business has grown significantly. Rail service would allow for additional handling of bulk raw materials and finished goods which would support potential new business growth in the future.



MGC Pure Chemicals America, Inc. is the market leader in the production of Ultra-Pure Hydrogen Peroxide and Ammonium Hydroxide. These products are used in the semiconductor industry for applications that require stripping, etching, and cleaning silicon wafers. Their Mesa facility employs over 100 people, and PIRATE will enable them to remove 150 trucks carrying hazardous materials from highways every month.



MATHESON

Matheson opened a new, large-capacity air separation unit in the PAMZ in 2015 and processes natural gases for numerous industries including industrial, electronic, and medical uses, and produces equipment for handling, purifying, engineering, generating, and managing natural gases. The addition of rail to ship cryogenic medical oxygen out of Mesa could be a huge relief to the supply chain in fighting the Covid-19 pandemic.

Recycled Construction Materials

Two firms in the PAMZ are helping to satisfy the Phoenix region's growing demand for construction materials – exclusively through the use of recycled materials.



CMC Commercial Metals

CMC Steel is a metals fabricator and recycler that produces rebar and T-posts. In 2020, CMC Steel announced a \$300 million expansion of their Mesa facility, which will allow for the production of Merchant Bar Quality (MBQ) Products and create over 200 new high-paying jobs for the region. CMC currently receives and ships 48,000 truckloads per

year via over the road freight. Rail would allow CMC to receive raw material and deliver products to customers more efficiently, eliminating an estimated 10,000 trucks per year while reducing congestion and improving safety both at the facility and on the highway.



CRM provides customers with leading-edge technology and specializes in crumb rubber for rubberized asphalt, sports fields and track infill, and rubber-molded products. It routinely sources crumb rubber to the largest asphalt contractors and synthetic turf product companies in North America, and could reduce trucking by 20% with the addition of rail service at their facility.

Automotive Technology

The PAMZ is also home to a high-skilled research and manufacturing workforce that serves the U.S. domestic vehicle manufacturing industry.



ZF TRW is a global transportation, technology, and automotive manufacturer and researcher. The plant in Mesa produces products for their active and passive vehicle safety systems, which include airbags, front-end protections, and advanced driver assistance systems. The PIRATE Project would benefit ZF by allowing the Mesa facility to receive raw material and deliver products to customers more efficiently, while reducing congestion and improving safety both at the facility and on the highway.



The 10-acre **Bridgestone Guayule Biorubber Process Research Center** is the core of Bridgestone's efforts to develop a domestic source of sustainable, natural rubber from the Guayule plant. Rubber produced in Mesa is sent to Bridgestone technical centers to be integrated into next-generation tires. Already investing over \$100 million in this innovative research, Bridgestone recently received a U.S. Department of Energy Joint Genome Institute grant to continue this groundbreaking research to bring products to commercial scale by 2030.

C | DRIVER OF ECONOMIC & FISCAL IMPACTS

In addition to the ongoing growth in the PAMZ and the region as a whole, a robust economic analysis of the area shows that the PIRATE Project is, in itself, a source of substantially increased economic growth. While the region is undergoing organic growth, with business development that is projected to add 5,064 jobs to the PAMZ by 2030, the PIRATE Project will enable expanded job creation.

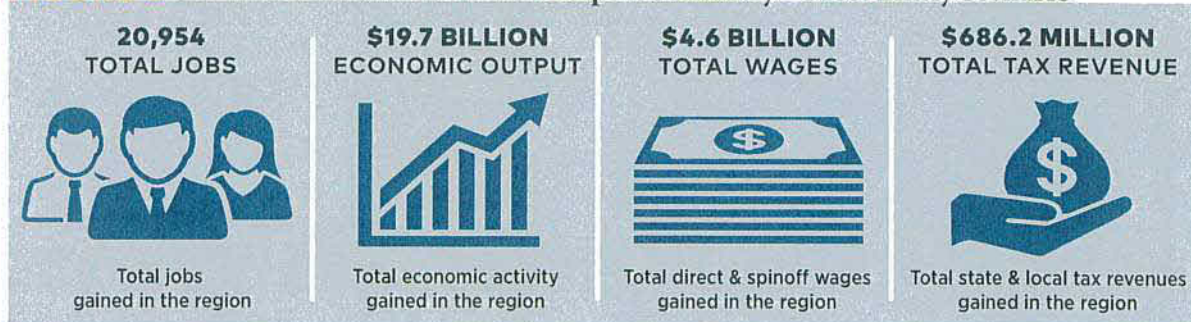
If the proposed rail line is constructed, the enhanced business development will likely add 10,644 jobs to the PIRATE study area and a total of 20,594 jobs to the Greater Phoenix region by 2030.¹

¹ Source: IMPLAN; Rounds Consulting Group, Inc.

The regional job estimates include secondary jobs created as a result of the cycle of spending and re-spending within the local economy.

Regionwide, over the 10 years, a total of \$19.7 billion in economic output and \$4.6 billion in wages is expected to be generated by the project. This most likely scenario of the rail expansion generates \$686.2 million in state and local tax revenues by 2030, depicted in Figure 2 below.²

FIGURE 2 10-Year Economic and Fiscal Impact Summary – Most Likely Scenario



SOURCE: Rounds Consulting Group, Inc.

D | KEY COMPONENT OF OUR CLIMATE FUTURE

The existing growth in the PAMZ is expected to rely on trucks traveling across local roads and interstate highways. However, rail provides several distinct advantages over trucking when it comes to fuel efficiency and emissions reductions. Rail has a higher load capacity, better mileage per gallon per ton, and, therefore, less fuel consumption and resulting emissions. The engine that operates the train is also significantly more energy-efficient, as it's able to transport one ton 470 miles per gallon compared to one ton 150 miles per gallon on a diesel truck.³ This requires less diesel fuel and releases greenhouse gases at a much smaller volume per ton-mile. In fact, in 2009, the Texas Transportation Institute (TTI) estimated railroads produce one ton of GHG per 47,308 ton-miles while trucks produce one ton of GHG per 5,802 ton-miles – a benefit of over 815 percent.⁴ The PIRATE project is expected to lead to the reduction of approximately 5,400 metric tons of GHG avoided in just the first year, which is roughly equivalent to the total energy use for 650 homes in one year.⁵

The PIRATE Project is directly aligned with the Climate Action Plans of two key supporters – the City of Mesa and Union Pacific Railroad.

² The full economic development model and additional scenarios are identified in the Economic Impact Analysis attachment.

³ Association of American Railroads. Retrieved from <https://www.aar.org/article/freight-rail-moving-miles-ahead-on-sustainability/>

⁴ Texas Transportation Institute "A MODAL COMPARISON OF DOMESTIC FREIGHT TRANSPORTATION EFFECTS ON THE GENERAL PUBLIC: 2001-2009". Retrieved from <https://static.tti.tamu.edu/tti.tamu.edu/documents/TTI-2012-5.pdf>

⁵ PA Equivalency Calculator

The Mesa Climate Action Plan for a Sustainable Community is a joint priority initiative enacted in June of 2021 by the Mesa City Council and Mayor John Giles. The plan sets out the city's future sustainability goals. These goals include achieving carbon neutrality by 2050 by reducing greenhouse gas emissions, and improving air quality by reducing vehicle miles traveled and increasing driving efficiency. By reducing the number of trucks used to transport materials from the PAMZ, the PIRATE project is uniquely positioned to help the City of Mesa reach its sustainability goals.

The Union Pacific Railroad 2021 Climate Action Plan sets out the company's future sustainability goals to promote both supply chain growth and future decarbonization. These goals include reducing scope 1 and scope 2 greenhouse gas emissions from locomotive operations by 26% by 2030 from a 2018 baseline emissions measurement. UP plans to achieve this goal by improving operational efficiency and minimizing fuel consumption by implementing energy management technology. As the Union Pacific Railroad is a key stakeholder in the PIRATE project, and is responsible for future operational management on the new connecting rail line, the PIRATE project is in direct alignment with this climate action plan.

Union Pacific can move one ton of freight 444 miles on a single gallon of diesel fuel, generating a carbon footprint that is 75% less than trucks. As the world seeks to improve sustainability, Union Pacific is committed and working to reduce their carbon footprint and help its customers do the same.

E | SUBSTANTIAL PUBLIC BENEFITS

The PIRATE Project is expected to remove an average of 29,166 truck trips off roadways in its first year of operations producing public benefits that in present value are likely to range between \$444 and \$820 million.⁶

FIGURE 3 Project Benefits Summary

CATEGORY	BENEFITS	PRESENT VALUE
Greenhouse Gas Emissions	1,234,000 – 2,657,000 MT CO2	\$46-101 Million
Local Air Pollution	949 – 1,713 MT NOx, 7 – 13 MT SO2, 81 – 145 MT VOCs, 14 – 25 MT PM2.5	\$7-12 Million
Road Safety	16 – 29 Avoided Fatalities and 346 – 623 Avoided Injuries	\$65-118 Million
Highway Wear and Tear	Reduction in 868 – 1,941 Million Truck Miles	\$146-265 Million
Operating Cost Savings	Switch 868 – 1,941 Million Truck Miles to Rail	\$180-324 Million
TOTAL		\$444-820 Million

SOURCE: Benefit Cost Analysis. Note: Baseline Growth (10.2%) and High VMT; High Growth (18.2%) and Low VMT Scenarios.

Many of the benefits quantified are calculated using an estimate of vehicle miles traveled (VMT) by truck trips that will be eliminated with the introduction of rail. These truck trips would occur to both nearby destinations like Phoenix, and farther destinations throughout the southwestern United States, including California.

Benefits accrue locally and throughout the region from reducing greenhouse gas emissions as well as health cost savings from reducing local air-polluting emissions. Converting the

⁶ Analysis over a thirty-year time horizon. Additional details are described in the attached Benefit Cost Analysis.

VMT avoided by the project to fuel consumption, and assessing the emissions associated with that level of diesel use shows that the project could reduce between 1.2 and 2.7 million metric tons of CO₂ equivalent greenhouse gasses valued between \$46 and \$101 million for the 30-year analysis period. Local air pollution benefits include the costs avoided by eliminating air-polluting emissions like NO₂ and PM_{2.5} through the switch to rail. Health cost savings range from \$7 million to \$12 million of savings in present value.

Removing trucks from roadways will fundamentally prevent crashes by reducing the number of large truck miles driven. Using the national rate of accidents for large trucks, the PIRATE project is expected to prevent 16-29 fatalities and 346-623 non-fatal injuries over 30 years. These benefits are valued between \$65-\$118 million that accrue to the public through the value of a statistical life as well as avoided emergency and health care costs.

Furthermore, removing heavy trucks from roadways reduces highway wear and tear and benefits the public through avoided road maintenance costs. These benefits range from \$146-265 million in present value over 30 years of savings.

Finally, the project will result in operation cost savings to manufacturers who will no longer have to transport all of their shipments by truck. These private benefits accrue because the marginal cost of shipping over rail (for high-weight products with a low time-value) are smaller than trucks. At present value the operation cost savings are between \$180 million and \$324 million.

There are other benefits that are likely to accrue, however are not directly quantified. These include congestion reduction, regional travel time savings, reduced noise pollution, and increased property values. These categories are more difficult to monetize and require more data to be discussed quantitatively. However, available research indicates that there could be net benefits from the switch from truck to rail for each of these categories.

For example, while noise pollution from an individual truck is lower than a rail locomotive, fewer train trips needed to move the same amount of product indicates that overall noise pollution and disruption should be less with rail. The project is also likely to be beneficial for property values considering that residential land nearby will increase in value due to the proximity to new jobs. There is also a strong indication that the switch to rail would help reduce congestion throughout the Phoenix metropolitan region. This area of Arizona had two of the U.S.'s top 100 bottlenecks in 2020 and any reduction in truck traffic could help to mitigate (or at least not contribute) to ongoing regional congestion issue. The potential decrease in congestion also means there could be travel time savings for commuters and personal trips on the main highways in the area.

In total, the quantified benefits of the project include private and public cost savings from keeping trucks off the road of approximately \$444 million to \$820 million over the next 30 years. There are also anticipated benefits to congestion, the nearby neighborhoods through reduced noise pollution, and increased property values. All of these benefits stem from the opportunity to replace millions of truck miles with rail service; a more fuel-efficient, higher capacity, and cost-effective shipping method than trucking.

Costs associated with this project include construction costs, right-of-way acquisition, and maintenance costs which are expected to total \$102.4 in present value. When compared to present value benefits across the same time horizon, the PIRATE project has a likely benefit-cost ratio range, depending on VMT and growth assumptions, between 4.3 and 8.0 and produces substantial returns on investment.

F | DEDICATED & COMMITTED PROJECT PARTNERS

A coalition of elected officials, public agencies, utilities, and private industries are working together to see this project to fruition. This project is an exemplar of public-private partnership and coordination.

City of Mesa

The City of Mesa has been leading the charge to bring rail to the PAMZ. As one of the fastest growing large cities in the country, Mesa must address tomorrow's challenges today through a commitment to investing in the community's infrastructure. The PIRATE Project achieves this by bringing critical rail infrastructure to existing private industry that needs it to operate and expand and provides the City with capacity for additional economic growth without creating new bottlenecks on our roads and freeways.

Union Pacific Railroad

Since summer 2020, Union Pacific Railroad has been working with the property owners along the PIRATE route to secure and acquire the necessary land and rights-of-way for the construction of the project. Union Pacific has made significant progress to advance; the finalization of rail design, engineering, permitting, environmental and construction of this new industry lead track; completing the real estate corridor development; petitioning the Surface Transportation Board for Right-of-Way Construction Authority; providing direct rail service upon completion of the project. To date, Union Pacific has invested over \$8.8 million into the PIRATE Project, and is committed to its success.

CMC Steel

CMC has been a key leader among industrial customers of the future PIRATE project. CMC constructed the first of its kind, technologically advanced steel manufacturing facility in the region in 2009 and employs 242 high-paying manufacturing jobs at the facility. Over the last 10 years, CMC has increased production capability from 275,000 tons per year to 400,000 tons per year through additional technology upgrades. A new \$300 million MBQ steel manufacturing facility expansion will add an additional 186 new jobs, and is highly dependent on the success of this PIRATE Project. Rail service would open new markets and allow CMC to continue to expand capacity, further increasing employment at the facility.

Broad Regional Support

Public sector support comes from not just the City of Mesa, but also neighboring Maricopa and Pinal counties, and a bipartisan group of state and federal lawmakers. Representatives Greg Stanton and Andy Biggs, and Senators Kyrsten Sinema and Mark Kelly are all supporters of the project, along with state-level representatives for the local districts. State-level organizations such as the Arizona Department of Transportation and the Arizona Commerce Authority have voiced their support.

Locally, the Greater Phoenix Economic Council, Mesa Mayor John Giles, and the Mesa Chamber of Commerce are all supportive of the project. From the private sector, the project has gained the support of all of the main manufacturers in the PAMZ and the support of the Arizona Manufacturing Council.

This project will additionally have a broader regional impact on transportation challenges by supporting the ongoing Sky Harbor project in Phoenix. The Sky Harbor project seeks to expand capacity at Phoenix's busiest airport, potentially to the detriment of adjacent rail-accessible industrial land. The firms that may lose rail access as a result of the Sky Harbor project would be able to relocate to available rail-accessible parcels in the PAMZ. Sky Harbor Internal Airport is strongly supportive of the PIRATE Project's ability to allow sustainable regional growth. By providing a regional relocation opportunity, the PIRATE Project will magnify and enable the full success of the Sky Harbor project.

The list of project supporters as of the RAISE Grant application deadline includes the following.

FIGURE 4 PIRATE Project Supporters

PUBLIC SECTOR SUPPORTERS	PRIVATE SECTOR SUPPORTERS	ECONOMIC DEVELOPMENT ORGANIZATIONS	LOCAL, STATE, & FEDERAL ELECTED OFFICIALS
Arizona State Land Department	Union Pacific Railroad	Sandra Watson, Arizona Commerce Authority	U.S. Senator Kyrsten Sinema
City of Mesa, Arizona	CMC Commercial Metals	Chris Camacho, Greater Phoenix Economic Council	U.S. Senator Mark Kelly
Maricopa Association of Governments	Fujifilm	Danny Seiden, Arizona Chamber of Commerce and Industry	U.S. House of Representatives Congressman Andy Biggs
Salt River Project	Bridgestone Americas	Carrie Kelly, Arizona Association of Economic Development	U.S. House of Representatives Congressman Greg Stanton
Aric Bopp, Executive Director, Arizona State University	ZF Passive Safety Systems	Allison Gilbreath, Arizona Manufacturing Council	Arizona State Representative Rusty Bowers, Speaker of the House
Arizona Department of Transportation	MGC Pure Chemicals America	Sally Harrison, Mesa Chamber of Commerce	City of Mesa Mayor John Giles
City of Phoenix	Crumb Rubber Manufacturers	John Lewis & Mike Hutchinson, East Valley Partnership	City of Mesa District 6 Councilmember Kevin Thompson
Phoenix Sky Harbor Airport	Matheson Tri-Gas		Supervisors Thomas Galvin & Jack Sellers, Maricopa County Board of Supervisors
Phoenix-Mesa Gateway Airport			Supervisor Mike Goodman, Pinal County Board of Supervisors

II PROJECT DESCRIPTION

The proposed PIRATE rail branch connects existing and future manufacturing companies in the PAMZ directly to the Union Pacific Railroad mainline, which runs just west of the project area. The proposed path of the PIRATE rail line extends eastward with a terminus at the border between Maricopa County and Pinal County.

This industry rail branch will intersect with the Union Pacific Railroad Phoenix Subdivision mainline from approximately milepost 934.65 to milepost 935.06. The branch will consist of an industrial lead track with a wye connection from the mainline, two support tracks, and potential future track expansion for a siding track, additional support tracks, and future industries. These proposed improvements also include associated grading, utility alignments, at-grade roadways/crossings, drainage improvements, permitting, and property acquisitions.

Local government representatives and business owners have been considering rail expansion as a method to mitigate transportation challenges, increase the safety of chemical transport, and grow capacity. The project concept solidified in the fall of 2019 when Union Pacific Railroad evaluated market conditions and expressed support in owning and operating the rail line. This was a significant milestone in the project and garnered additional support amongst project partners.

III PROJECT LOCATION

The PIRATE Project location is ideal for heavy industrial rail expansion, given existing heavy industrial uses and vacant, developable land in the project area. In addition to being located within a Federal Opportunity Zone, the PIRATE Project is located within several zones that are designed to incentivize economic growth and development across the nearby 3,000 acres of vacant land.

A | FEDERAL OPPORTUNITY ZONE

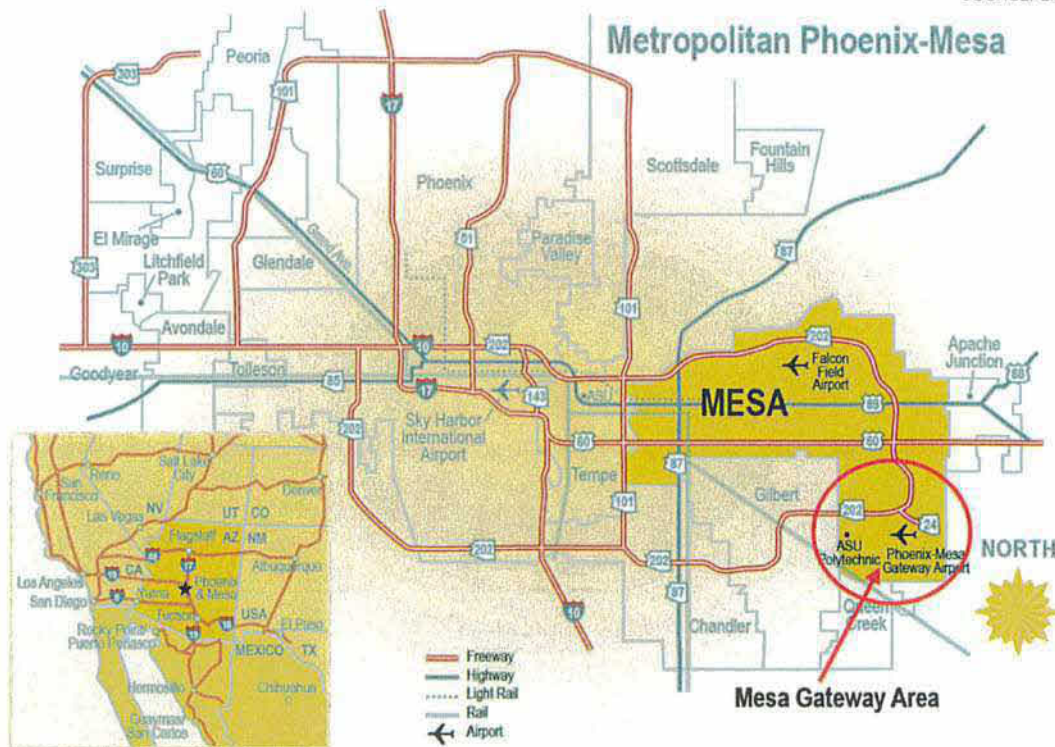
The entire project sits within a designated Federal Opportunity Zone. This designation is intended to foster job creation and attract private investment to support development in economically distressed areas of the United States. This has become a critical business attraction component for the area, with multiple new investments being made through this beneficial federal program.

B | MESA GATEWAY AREA

The PIRATE Project is located within the City of Mesa's Mesa Gateway area. The Mesa Gateway Area is a 35-square-mile, developing aerotropolis ideal for international companies, aerospace/aviation and defense firms, high-tech manufacturers, large industrial users, research and development, data centers, and educational institutions. The region offers highly skilled technology talent, abundant land and building options, substantial infrastructure, and convenient market access.

FIGURE 5 Mesa Gateway Area

SOURCE: City of Mesa



The Phoenix-Mesa Gateway Airport is the second largest airport serving the greater Phoenix area and was also developed on the former Williams Air Force Base. This effort cleaned up and redeveloped the land into a useful airport, which now serves destinations across the U.S. and Canada. In November 2021, Gateway Airport was also selected as the new home to Gulfstream Aerospace's Sustainable Aircraft Service Center, a \$70 million, 225,000 square-foot facility which is expected to open in late 2023 and bring hundreds of new jobs.

The Gateway Area is home to several other development areas. For example, the Ray Road Industrial Development Area is a fast-developing industrial corridor at the north end of Gateway Airport with more than six million square feet of industrial space announced and under construction. Most notably, this area is home to Dexcom's 486,000 square-foot medical device distribution center, Electrameccanica's 500-employee Electric Vehicle manufacturing center, and CAVU Aerospace's aircraft component repair facility.

Gateway is also home to the Elliot Road Technology Corridor, which has become one of the nation's premier mission-critical technology and data center hubs, with current and future campuses for Apple, Google, Meta (Facebook), CyrusOne, EdgeCore, NTT, EdgeConneX, Comarch, and Able Grid. These campuses will bring billions of dollars in capital investment to the region and generate significant sales tax revenues for the city, county, and state. There is also over 6.8 million square feet of industrial development available and under construction within this corridor for manufacturing, logistics, and distribution uses.

The Mesa Gateway Area is home to a broad range of industry clusters, including:

- **AEROSPACE/AVIATION & DEFENSE** The Mesa Gateway Area hosts world-class players including Embraer, Cessna, Gulfstream Aerospace, Able Aerospace Services, Aerocircular, CAVU Aerospace, and more. Phoenix-Mesa Gateway Airport is also projected to serve 10 million annual passengers by 2030, with Allegiant, WestJet and Swoop, Flair Airlines, and Sun Country Airlines currently offering flights to over 60 locations across the US and Canada.
- **TECHNOLOGY** The Mesa Gateway Area is home to ground-breaking technology institutions such as the Arizona Center for Algae Technology and Innovation, the Cognitive Engineering Research Institute, and operations such as Bridgestone's Biorubber Process Research Center, Apple's Global Command Center, Google's future Mission Critical Campus, Meta's \$800M data center campus, ElectraMeccanica, Dexcom, First Solar, JX Nippon and more.
- **HEAVY INDUSTRIAL, MANUFACTURING & LOGISTICS** CMC Steel, Fujifilm, Mitsubishi Gas Chemical, ZF, Lowe's, Amazon, CRM Rubber, Matheson Tri-Gas, Metso, and Niagara Bottling all have major manufacturing and logistics/distribution operations in the Mesa Gateway Area.
- **EDUCATION** The PIRATE Project study area is located near three technical universities and colleges that produce new graduates entering the industrial and manufacturing workforce.



Arizona State University (ASU) Polytechnic – The Zone is close to ASU's Polytechnic campus with more than 5,500 students enrolled in science, engineering, management, technology, and education programs.



Chandler Gilbert Community College (CGCC) – Also located within a few minutes of the Zone is Chandler-Gilbert Community College's Williams Campus with more than 2,000 students in nursing, aviation, and applied technology programs.



East Valley Institute of Technology (EVIT) – Considered a model for high-quality career and technical education, EVIT provides more than 40 advanced career training programs to more than 5,000 high school students and adults in the East Valley, with financial aid available to those who qualify.

C | PECOS ADVANCED MANUFACTURING ZONE

The PIRATE Project is completely located within the PAMZ, which is located in the southern portion of the Mesa Gateway Area (see Figure 6 below). The PAMZ is a designation from the City of Mesa to establish a campus-like setting with advanced manufacturing companies and an integrated mixture of ancillary land uses that support the primary manufacturing employment in the area.

This aerial map illustrates the Phoenix Gateway Airport and its surrounding industrial and commercial zones. Key features include:

- ASU Phoenix Gateway Airport:** The central focus, with labels for "ASU ARIZONA STATE UNIVERSITY POLYTECHNIC CAMPUS" and "PhxMesa Gateway Airport".
- Highways and Roads:** SR-24, I-17, and various local roads like Pecos Rd, Germann Rd, and Meridian Rd.
- Land Use Overlays:**
 - Overlay Zone:** Indicated by a yellow dashed line.
 - Mission Critical/Tech:** Shaded in light blue.
 - Spec Industrial:** Shaded in light orange.
 - Mfg & Dist:** Shaded in light red.
 - Commercial/Mx Use:** Shaded in light purple.
- Other Landmarks:**
 - Levine Commercial Dev:** A large purple-shaded area.
 - Gateway East 400 acres:** A large orange-shaded area.
 - ASU Innovation Zone 400 acres:** A large orange-shaded area.
 - PIRATE Ball Spur (Union Pacific):** A red-shaded area.
 - Sunbelt 229 acres:** A large orange-shaded area.
 - Sunbelt 308 acres:** A large orange-shaded area.
 - Sunbelt 65 acres:** A small orange-shaded area.
 - Sunbelt 35 acres:** A small orange-shaded area.
 - State Land 310 acres:** A large orange-shaded area.
 - 7F 15 acres:** A small orange-shaded area.
- Businesses and Facilities:**
 - FUJIFILM:** A large red-shaded area.
 - Project Cerb:** A small red-shaded area.
 - Auto Mall (Barge):** A small red-shaded area.
 - Meridian Commons Park:** A small red-shaded area.
 - CRM:** A small red-shaded area.
 - CH2:** A small red-shaded area.
 - 7F:** A small red-shaded area.
 - AEI:** A small red-shaded area.
 - Madison Ventures:** A small red-shaded area.
 - The Cubes:** A small red-shaded area.
 - Project Earl:** A small red-shaded area.
 - Loews:** A small red-shaded area.
 - Rich Center @ Elsworth:** A small red-shaded area.
 - Sunbelt 65 acres:** A small orange-shaded area.
 - Sunbelt 35 acres:** A small orange-shaded area.
 - State Land 310 acres:** A large orange-shaded area.
 - 7F 15 acres:** A small orange-shaded area.

D | EMPLOYMENT OPPORTUNITY FLOATING ZONE

E | FOREIGN TRADE ZONE

F | OVERBURDENED COMMUNITY & AREA OF PERSISTENT POVERTY

PECOS INDUSTRIAL RAIL ACCESS AND TRAIN EXTENSION PROJECT | 2022 RAISE Grant Application

exceeding 20 percent as measured by the 2014-2018 American Community Survey 5-year data series. This area also experiences disproportionate exposure to hazardous air pollutants. The population in census tract 5228.02 incurs a higher lifetime risk of developing cancer from the inhalation of air toxins than 96% of Arizona residents. The population in this area are also at a higher risk than 97% of Arizona residents of developing respiratory health conditions due to the exposure to air toxins. The disproportionate exposure of a low-income community to environmental hazards qualifies the population within census tract 5228.02 as an Overburdened Community.

IV GRANT FUNDS, SOURCES, & USE OF PROJECT FUNDING

The total expected cost of the PIRATE Project is \$102,066,000. The project team is submitting a RAISE Grant request for \$25,000,000. No other federal funds are being used for this project, and multiple local public and private partners are paying for the remaining costs, including all contingencies and any overages. The local match ratio for this project is 76%. The overall project budget is listed in Figure 7 below.

A | SOURCES & USES SUMMARY

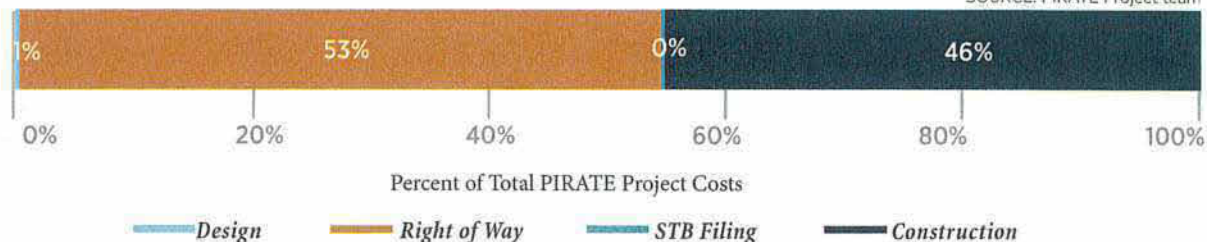
FIGURE 7 PIRATE Project Budget

NOTE: In thousands of dollars. SOURCE: PIRATE Project team

CATEGORY	YEAR			TOTAL	LOCAL MATCH RATIO
	2021	2022	2023		
Engineering	\$400	\$542	\$4,666	\$5,608	100%
Environmental Permitting	\$300	-	-	\$300	100%
Construction	-	\$16,123	\$25,000	\$41,123	39%
Design, Permitting, and Construction Contingencies (15% of Total)	-	\$2,500	\$4,555	\$7,055	100%
Right of Way Acquisition	\$8,500	\$39,000	-	\$47,500	100%
STB Filing	\$300	\$90	\$90	\$480	100%
Total	\$9,500	\$58,255	\$34,311	\$102,066	76%
Local Funding Amount			\$77,066		
RAISE Grant Request			\$25,000		

FIGURE 8 PIRATE Project Budget by Type of Cost

SOURCE: PIRATE Project team



Local funding is provided by commitments from an array of public and private partners that will directly benefit from the project. In addition to direct funding of the project components, creative financing mechanisms have also been identified. For example, in 2008, CMC Steel entered into a Development Agreement with the City of Mesa to assist in locating and constructing their new micro mill operation in the PAMZ. This Development Agreement deferred public half-street road improvements for ten years along Pecos Road and Meridian Road, which front CMC Steel's operation on the northern and eastern boundaries. In 2018, this deferral was further extended into 2028. In close collaboration with CMC Steel, the City of Mesa has agreed that the PIRATE Project will satisfy the development agreement as an alternative project and will jointly contribute up to the estimated costs of these half-street improvements. These improvements are estimated to cost approximately \$6,689,200 and will strictly be applied to the costs of the public road crossings within city-owned Right of Way.

B | DETAILED CONSTRUCTION COSTS

Construction cost estimates total \$54.1 million and are broken down in Figure 9 below.

FIGURE 9 Design, Utility and Construction Costs

SOURCE: PIRATE Project team

	LABOR	MATERIAL/CONTRACTS	TOTAL
Engineering			
Track	\$1,108,000	\$1,500,000	\$2,608,000
Signal	\$1,552,064	\$1,447,936	\$3,000,000
Environmental Permitting	\$0	\$300,000	\$300,000
Construction			
Track Construction	\$7,683,668	\$5,809,466	\$13,493,134
Track Removal	\$44,215	\$0	\$44,215
Utilities	\$0	\$2,500,000	\$2,500,000
Equipment	\$0	\$480,000	\$480,000
Grading & Excavation	\$0	\$24,605,369	\$24,605,369
Contingencies (15%)	\$1,558,192	\$5,496,416	\$7,054,608
TOTAL	\$11,946,139	\$42,139,186	\$54,085,325

V PROJECT MEETS OR EXCEEDS ALL SELECTION CRITERIA

The PIRATE Project performs particularly strongly across all merit criteria for the RAISE Grant, as described in the sections below.

A | PRIMARY SELECTION CRITERIA

i. SAFETY

The PIRATE Project provides immediate enhanced public safety for the area by removing hundreds of large truckloads per month off the roadways. Large industrial companies in the area like CMC Steel, Fujifilm, Mitsubishi Gas Chemical, ZF, and CRM Rubber currently send hundreds of trucks per month to Central Phoenix transload facilities. The PIRATE Project will bring freight rail directly to their sites, which will remove these truck trips from roads and freeways, reducing traffic and congestion, as well as removing industrial materials from public roadways. The removal of these trucks from the road is estimated to reduce 1-2 large truck-related injury crashes in the first year of operation.

Rail not only reduces the likelihood of fatal or injury vehicle collisions but also has safety benefits for its employees. By using innovative safety technologies like Ultrasonic Wheel-Defect Detection and Wayside Detectors, rail operators have reduced equipment incidents by 5% from 2007 to 2017.⁷ Over the same time, Union Pacific Railroad reported a 54% reduction in the employee injury rate.⁸ This is in part due to their Total Safety Culture and training system. Other safety technologies include remote-controlled locomotives and drones, both of which eliminate the need for an employee to be physically near railcars to operate them or conduct inspections. This can reduce human error and keep employees out of dangerous scenarios. When it comes to addressing public safety, Union Pacific Railroad also commits to improving education and safety awareness around grade crossings and for pedestrians. Union Pacific Railroad expects to implement these safety measures on the rail branch proposed in this project.

Particularly relevant for the several chemical manufacturers in this zone, rail has a record of safely transporting hazardous materials and chemicals. According to UP, 99.99 percent of the industry's freight rail chemicals shipments currently move without incident or loss.⁹

Furthermore, the Phoenix-Mesa metro area consistently ranks among the safest places in the U.S. for high-tech companies to do business because of its low risk of natural disaster. A 2008 study, conducted by SustainLane, ranked Mesa as the safest place in the nation when considering natural disaster risks such as hurricanes, flooding, catastrophic hail, tornado super-outbreaks, and earthquakes.¹⁰

⁷ Source: Union Pacific Railroad. Commitment to Safety. (2020).

Retrieved from: <https://www.up.com/aboutup/community/safety/commitment/index.htm>

^{8,9} Ibid

¹⁰ Source: City of Mesa

ii. STATE OF GOOD REPAIR

The PIRATE Project represents the construction of a new industry rail track, which will be constructed for permanent, long-term use to service existing and future industries in the area. This track will be owned, operated, and maintained by Union Pacific Railroad. As a Class I railroad operator, Union Pacific Railroad's ownership of this line will ensure a long-term state of good repair for the PIRATE Project. Additionally, the removal of trucks from local, state, and interstate highways will limit roadway wear and tear.

Union Pacific Railroad is committed to meeting the Federal Railroad Administration maintenance requirements and keeping their tracks in safe operating condition. They continuously inspect their railroad track, locomotives, and equipment. Inspection and regular maintenance of this new track would be absorbed into Union Pacific Railroad's regular maintenance and repair schedules within the Phoenix Subdivision. It would be managed by the Local Manager of Track Maintenance and team. The Subdivision budget would allow for all repairs and maintenance.

Maintenance includes the Federal Railroad Administration's formal inspections once per month and replacement or repair of ties, ballast, and track as needed. Since this will be a brand-new track, maintenance costs will be very minimal in the first 10 years. While it is difficult to project future maintenance costs for the PIRATE Project rail line, in 2019 Union Pacific Railroad spent \$354 million performing rail, ballast, and tie maintenance across more than 41,000 miles of track. This had an average cost per mile of \$8,470. Using this average, the six-mile PIRATE Project rail line would see about \$51,000 in maintenance costs per year.

In addition, Union Pacific Railroad is taking advantage of advancements in technology that enable them to maintain and inspect their railroads more efficiently and more effectively. Union Pacific Railroad utilizes unmanned geometry measuring systems to assess the condition of the track in real-time. This technology can be attached to any boxcar, is powered by solar panels, and records and reports track abnormalities. Gathering big data on past incidents also helps Union Pacific Railroad to predict and prioritize high-risk areas and maintain them before incidents occur. Union Pacific Railroad also uses drones to help complete some of their more dangerous and trickier site inspections, like rail bridges, to ensure those sites get the ongoing maintenance they require.

iii. ECONOMIC COMPETITIVENESS

The PIRATE Project has strong potential for long-term job creation and economic opportunity. Additionally, the introduction of rail gives the PAMZ a competitive advantage over trucking as a result of the many efficiencies of rail for heavy, high-volume, and low-time value goods. Shipping by rail allows a manufacturer to ship the same weight of the product as they would by truck, but with significantly lower fuel costs and operating costs. The fuel efficiency and high capacity of rail make it a more affordable option than trucking for manufacturers, allowing them to use their savings to invest in expansion and jobs.

The PIRATE Project will generate an estimated 20,954 new jobs and \$19.7 billion in economic activity¹¹ over the first 10 years. This will be a significant driver of private investment and further enhance the Gateway area as a major job center for the region. Providing multi-modal transportation options is key for any major logistics and manufacturing hub. The addition of rail will help attract new industries to the East Valley, further diversifying the economy and driving job growth in the region.

Development of the PIRATE Project included conducting a robust economic impact analysis to evaluate the economic competitiveness of the Project. The analysis included the development of four projections to quantify and compare various scenarios including a plan of no action and plans that enhanced economic gains directly tied to the rail expansion over 10 years. It also forecasts potential growth derived from a review of current business activity, current business trajectories, and projected business development opportunities directly tied to rail.

Employment in the PIRATE study area is projected to increase from 1,921 in 2020 to between 3,444 and 15,755 in 2030 – a 6.0 to 10.2% average annual increase.

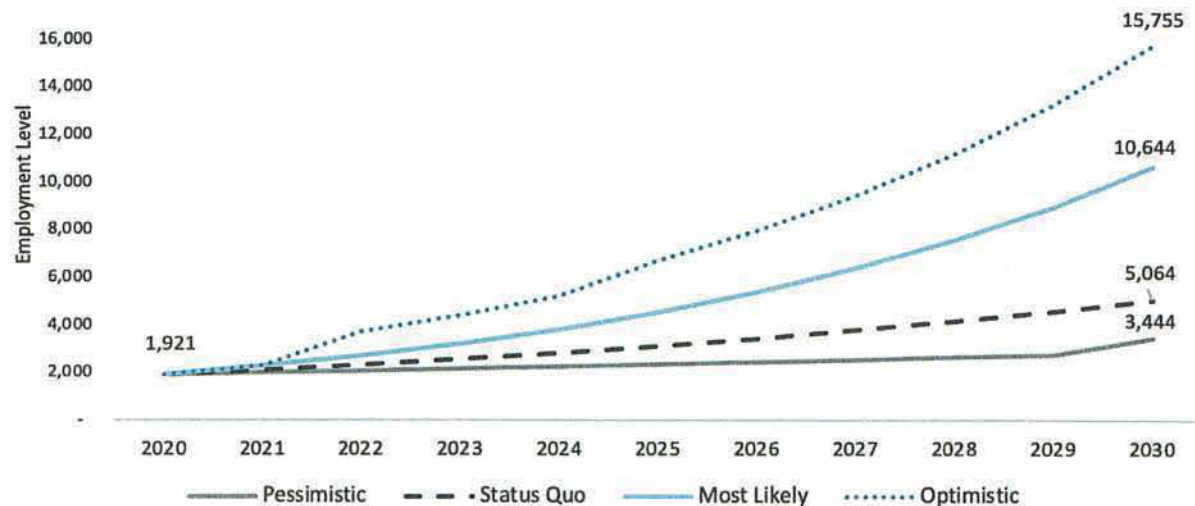
FIGURE 10 10-Year Employment Forecast Scenarios for the PIRATE Study Area

NOTE: Employment projections for the PIRATE study area. SOURCE: Maricopa Association of Governments; Rounds Consulting Group, Inc.

YEAR	2020	2030			
SCENARIO	ACTUAL	PESSIMISTIC	STATUS QUO	MOST LIKELY	OPTIMISTIC
Employment Level	1,921	3,444	5,064	10,644	15,755
Net Growth	-	1,523	3,143	8,723	13,834
Annual % Growth	-	6.0%	10.2%	18.7%	23.4%

FIGURE 11 10-Year Employment Forecast Scenarios for the PIRATE Study Area

NOTE: Employment projections for the PIRATE study area. SOURCE: Maricopa Association of Governments; Rounds Consulting Group, Inc.



¹¹ Rounds Consulting Group Report, Most likely scenario, direct and secondary jobs.

ECONOMIC AND FISCAL IMPACT SCENARIO COMPARISONS

Total jobs resulting from the project over the next 10 years (including direct, indirect, and induced employment) range from 3,596 to 32,661, with total economic output from the project ranging between \$4.1 and \$32.9 billion, as summarized in the Figures below.

FIGURE 12 10-Year Economic and Fiscal Impact Scenario Comparisons

SCENARIO	TOTAL JOBS (1)	TOTAL WAGES (2)	TOTAL ECONOMIC OUTPUT (3)	TOTAL TAX REVENUES (4)
Pessimistic	3,596	\$973,798,000	\$4,152,996,000	\$145,565,000
Status Quo	7,420	\$1,886,175,200	\$8,044,046,800	\$281,474,300
Most Likely	20,594	\$4,612,745,100	\$19,672,159,600	\$686,220,200
Optimistic	32,661	\$7,726,073,200	\$32,949,694,600	\$1,144,952,500

NOTE: May not sum to total due to rounding.

SOURCE: IMPLAN; Rounds Consulting Group, Inc.

¹⁾ Primary, or direct, impact generated from the PIRATE study area;

²⁾ Secondary, or indirect and induced impact generated for the region from activity in the PIRATE study area;

³⁾ Number of jobs over 10-years;

⁴⁾ Total wages earned over 10-year;

⁵⁾ Total economic output generated over 10-years;

⁶⁾ Total state and local tax revenues generated over 10-years.

FIGURE 13 10-Year Impact Scenario Comparisons - Economic Output & Wages

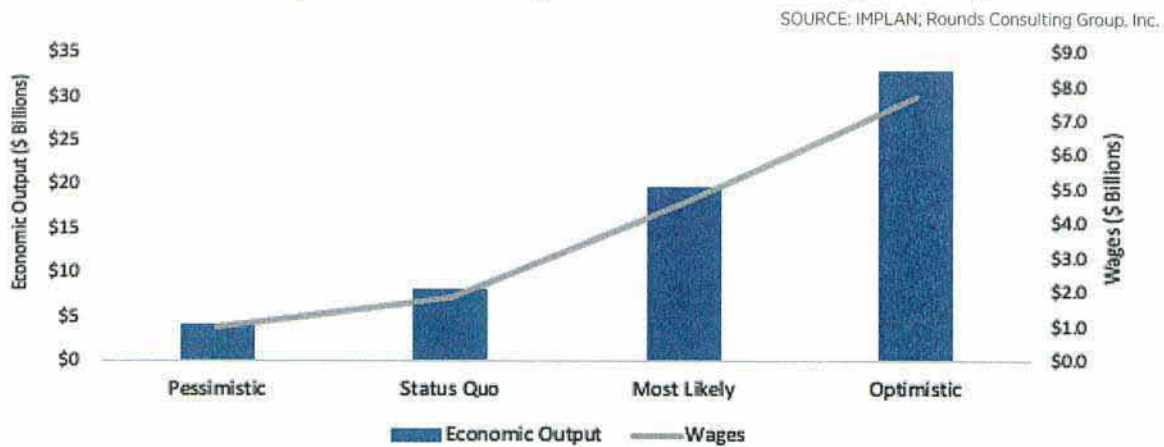
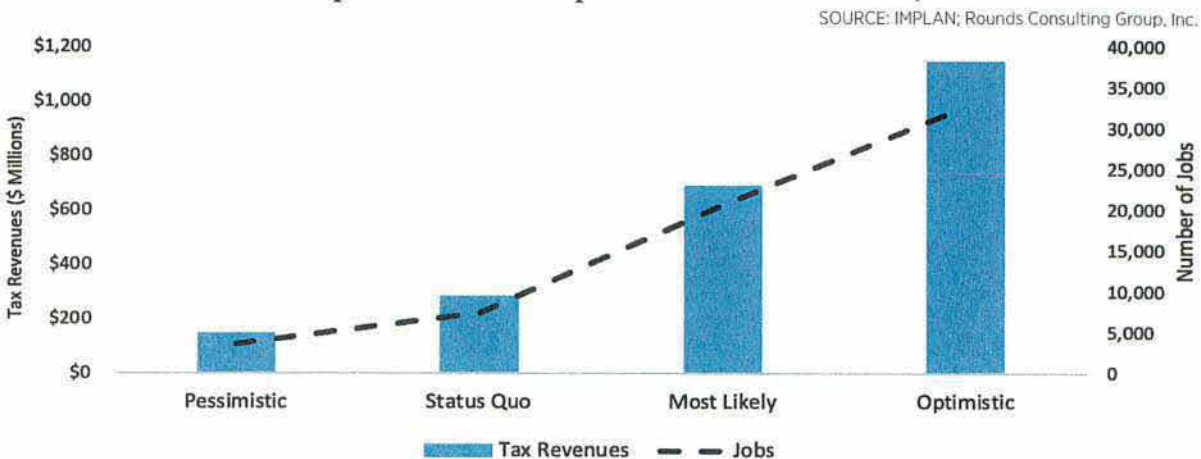


FIGURE 14 10-Year Impact Scenario Comparisons - Tax Revenues & Jobs



iv. ENVIRONMENTAL SUSTAINABILITY

This project has the potential to positively affect air pollution in the surrounding overburdened communities. A 2019 study estimates that in 2010, approximately 25% of childhood asthma cases were attributable to air pollution from NO₂, and 49% (around 5,000 cases) were due to pollution from PM₁₀ in Maricopa County where the project is located. Over the ten years from 2000 to 2010, the number of cases attributable to air pollution has decreased significantly. Reducing truck emissions could help to further reduce air pollution by decreasing the presence of harmful substances like NO₂ and PM_{2.5} in the atmosphere. The health cost savings analysis in the emissions reduction benefits section shows that the project has the potential to reduce the costs of these pollutants between \$3.3 million to \$22 million over 30 years by switching trucks to rail. This represents a reduction in air pollution that could help to reduce health costs and illness risk in the area.

This project has the potential to eliminate thousands of truck trips from highways every year, which contribute to substantial bottlenecks and highway intersection slowdowns. All of the time that these trucks spend idling contributes to not only GHG emissions but also to the pollution of our air. Allowing these shipments to be carried out over rail has the potential to reduce congestion emissions and improve travel speed and efficiency.

The American Transportation Research Institute releases a list of America's top truck bottlenecks each year. For 2020, two of the most congested bottlenecks in the country existed in nearby Phoenix. One bottleneck, (ranked 30th in 2020) at the intersection of I-17 and I-10, has experienced an 11% decrease in average peak speed from 2018 to 2019. This intersection congestion likely impacts current shipments destined for a northwest Phoenix transload facility and destinations farther west like Los Angeles. It is also the intersection with the highway that leads north from Phoenix to locations like Flagstaff, AZ, and east to Albuquerque, NM. Essentially any destination northwest of Mesa is likely to have its shipments impacted by this severe bottleneck in Phoenix.

Another bottleneck, (ranked 69th in 2020), is at the intersection of I-10 and U.S. 60, which is on one of the direct highway routes between Mesa and Phoenix. Both of the shortest routes between the project site and Phoenix are currently impacted by this bottleneck. Any shipments being sent to a Phoenix transload facility or farther northwest are contributing to congestion and idling-related emissions. This project has the potential to reduce the number of trucks on the road contributing to this congestion by the hundreds per month and would, therefore, reduce truck idling and emissions from fuel consumption, at least from those vehicles. These factors help align the project benefits with the City of Mesa's Climate Action Plan, and their key focus areas to achieve carbon neutrality by 2050 and promote improved air quality for a sustainable community.

The project also has the potential to provide conservation benefits in the same way, by developing already industrial use land. This site is likely unsuitable habitat for endangered species considering its proximity to the airport, residential neighborhoods, and major highways. In this way, the development of this land could mean no loss in habitat for endangered species and could prevent the development of potentially suitable habitats.

v. QUALITY OF LIFE

This project could improve the quality of life for those nearby the site, and for those who live near highways throughout the region by reducing congestion, improving highway safety, and bringing high-paying, low-barrier to entry jobs to the area.

Reducing commuter congestion in the immediate area could provide measurable travel time savings for passenger vehicles. This project also has the potential to increase the quality of life by improving connectivity between workers and jobs by creating new manufacturing, construction, and management jobs. For the residential neighborhoods near the project location, this represents an opportunity to work closer to home. A wide range of jobs related to manufacturing are anticipated to become available as a result of the PIRATE Project, accommodating employees of all skill levels. These jobs are high paying and high skill, but represent an opportunity for job seekers of all education levels.

As mentioned above, the thousands of trucks leaving the PAMZ each year contribute to existing severe bottlenecks in the Phoenix-Mesa area. Replacing these trucks with rail not only provides benefits by reducing congestion-related emissions, but it also creates benefits for commuters who may have shorter travel times if truck traffic and congestion were to decrease.



Faster travel times due to reduced congestion have associated travel time savings, which can be valued at up to \$27.10 per person-hour depending on the purpose of travel.

Personal trips to grocery stores, clinics, and banks could all be made more feasible by reduced travel times and costs. Additionally, it enhances connectivity between citizens and jobs by making it faster and easier to travel

and to go farther, for available work. A long commute is often a barrier between qualified workers and available jobs, but reducing congestion and shortening travel times may open up additional housing options.

This project has the potential to increase the quality of life by increasing job opportunities in the region. The construction of new rail, along with the operation of it and the anticipated expanded capacity of existing and new producers in the area, should create hundreds of new jobs. For the residential neighborhoods near the project location, this represents an opportunity to work closer to home, and a new employment source. A wide range of jobs related to manufacturing is expected to become available as a result of the project, from low to high skill, accommodating a variety of potential employees.

This creates an opportunity for a growing community, where workers have access to good jobs, and reduced congestion improves their access to the other essentials in their area. Over time, as capacity increases due to the project along with jobs, residential neighborhoods could expand as well, making use of nearby residentially-zoned land.

B | SECONDARY SELECTION CRITERIA

i. INNOVATION

The PIRATE Project is innovative in its forward-thinking planning. Synergies between rail and airports provide enhanced economic benefits to regions that can accommodate multi-modal freight and cargo options. The Phoenix-Mesa Gateway Airport and the Gateway region around it are growing rapidly. Remote-



controlled locomotive and drone technologies represent) an opportunity to automate, streamline, and improve existing rail operations and inspections. Union Pacific Railroad has been a leader in implementing these technologies and in driving innovations in drone capabilities, like the development of Perceptive Navigation Technology, which enables drones to fly in locations without GPS coverage.¹²

ii. PARTNERSHIP

The PIRATE Project represents a true public-private partnership with multiple government entities as well as multiple private entities providing time and resources to move this project forward. The City of Mesa has served as a central point-of-contact for the effort, however, SRP, Union Pacific Railroad, Pinal County, City of Phoenix, CMC Steel, Fujifilm, ZF, Arizona State Land Department, Arizona Department of Transportation, and many other private property owners have been involved since the beginning. For example, SRP and Pinal County collaborated to assist in funding the entire economic impact analysis.

Local businesses have agreed to partner with the other main manufacturers in this zone to jointly invest in this project, which will help the region grow and expand its business capacity. This has drawn the support of both the Mesa Chamber of Commerce as well as the Maricopa County and Arizona House Representatives for these districts. Collaboration has occurred on the local, city, state, and federal levels to help move this project forward, using the synergy of private-public cooperation. This is made evident in the substantial list of Support Letters from across the state provided for this project, which are an attachment to this grant submittal.

VI | ADVANCED PROJECT READINESS

A | ENVIRONMENTAL RISK REVIEW

The PIRATE Project has included extensive planning conducted since its inception. These efforts are accelerating as the project nears construction. All assessments are conducted on the proposed rail corridor, which ranges from 75 to 225 feet wide and is approximately 6 miles long. This corridor spans 28 parcels in both Maricopa and Pinal County.

¹² Union Pacific Railroad. How America's Top Railroad Learns to Fly. (2017).

Retrieved from: https://www.up.com/aboutup/community/inside_track/railroad-learns-to-fly.htm

B | REQUIRED APPROVALS

The PIRATE Project Team is actively engaged in the environmental review and permitting for the PIRATE Project. Currently, the Project Team has also begun the process of filing for Surface Transportation Board (STB) approval, which includes a scheduled Environmental Assessment. Approval will satisfy all NEPA requirements.

NEPA went into effect in 1970 and established requirements for federal agencies to consider environmental effects in their project planning. Intending to reduce environmental harm done from federal projects, NEPA created a framework for evaluating the potential environmental outcomes of different types of work. It requires that for federally funded projects, either a categorical exclusion (CE) must be issued, or an environmental assessment conducted, or an environmental impact statement must be made. When the likely impacts of a project are well known based on previous projects and considered negligible, the project is often categorically excluded. If the potential environmental effects of a project are unknown, NEPA requires an environmental assessment (EA) to determine the potential outcomes. In the case that the EA determines an environmental impact, or that the project has an anticipated impact, NEPA describes the environmental impact statement (EIS) process. This assesses environmental impacts as well as determines alternatives and mitigation methods. A detailed timeline of the ongoing environmental review/NEPA process is listed in Figure 15 below.

FIGURE 15 NEPA/STB Timeline

DATE	MILESTONE
March 2021	Petition Filed with STB
May 2021	Waiver of Six-Month Waiting Period for Environmental Review Issued
July 2021	Memorandum of Understanding Signed with Environmental Consultant and STB
December 2021	Initial Environmental Desktop Review Completed
March 2022	Request for Reclassification (EIS to EA) submitted to STB
May 2022	Field Work Completed
June 2022	Draft EA Prepared
July 2022	Public and Agency Review of Draft EA
December 2022	Final EA Issued
December 2022	Petition to Begin Construction Filed

Environmental & Floodplain Permitting

A desktop review of environmental, floodplain, and local permitting requirements has been completed. National Wetlands Inventory (NWI), USGS mapping, and FEMA information were reviewed against the preliminary design to evaluate environmental impacts and impacts to Waters of the U.S. (including wetlands). Environmental impacts and permitting efforts will be relatively minimal. Several unnamed tributaries are located within this region, including one east of the intersection of S Mountain Rd and Pecos Rd. There are also two semi-permanent ponds between Ellsworth Rd and S Signal Butte Rd. However, limited exposure and impacts are anticipated

with the proposed improvements. Impacts to wetlands and Waters of the U.S. are estimated at less than 0.10 acres with the overall project falling under a Nationwide Permit (NWP). Should there be a need for mitigation, it appears that an in-lieu fee program is in place to accommodate.

Based on a review of available information, the proposed industrial lead project crosses both the Rittenhouse Road Drain and Ellsworth Road Channel are maintained by the Flood Control District of Maricopa County. The flood control projects were designed to convey the 100-year runoff event. Additionally, several of the sites cross natural drainage ways, which may also be under the jurisdiction of the county. The project is located within both the Queen Creek and Suburban Irrigation Districts, with a network of existing laterals and drains that will be bisected as part of the proposed industrial lead. As such, the proposed drainage structures were recommended at existing irrigation crossings to maintain irrigation water rights. The following table provides a high-level summary of anticipated permitting requirements for the project.

FIGURE 16 Permitting Requirements for Mesa Gateway PIRATE Project

SOURCE: Union Pacific Railroad

AGENCY	PERMIT	REQUIREMENTS	ANTICIPATED PERMIT ISSUANCE DATE
FEDERAL			
U.S. Army Corps of Engineers (USACE)	Section 404 - NWP #14	Any loss of wetlands requires submittal	60-120 days after submittal
U.S. Fish and Wildlife Service (USFWS)	Coordination with USACE	TBD	
Federal Aviation Administration	Notice Criteria	Project must be filed with the FAA	45 days after application is received
Tribal			
STATE			
Arizona Department of Environmental Quality	Individual Section 401 Water Quality Certification		60-120 days after submittal, in conjunction with 404 permit
Arizona Department of Environmental Quality	Section 402 Stormwater Permit/NPDES	If >1 acre ground disturbance	Contractor will obtain
Arizona State Historic Preservation Office	Coordination with USACE	TBD	Coordination with USACE if deemed necessary by USACE Archaeologist
LOCAL			
Maricopa County	Floodplain Use Permit	Permit Required in FEMA floodplain and/or Q100>50 cfs	Typically, Preemption, obtaining the permit after the fact
Queen Creek Irrigation District	Coordination / Permit	Required for irrigation lateral crossings	60 days after application is received
Suburban Irrigation District	Coordination / Permit	Required for irrigation lateral crossings	60 days after application is received

Hydrology & Hydraulics

A desktop-office-level hydrologic and hydraulic (H&H) review and summary of anticipated floodplain impacts and permitting requirements have also been completed. Preliminary calculations were performed to provide anticipated drainage structure sizes to meet hydraulic design criteria, minimize the increase of backwater, and comply with regulatory conditions.

C | ASSESSMENT OF PROJECT RISKS & MITIGATION STRATEGIES

The PIRATE Project will require the acquisition of easements from private property owners and right-of-way from the City for public road crossings. The easements will vary in width depending on the location of support tracks, and other necessary rail infrastructure. The existing public road crossings will be at-grade crossings. The new industry track will also accommodate drainage in the appropriate areas. The industry track will be owned, operated, and maintained by Union Pacific Railroad. The new industry track will connect to the existing Union Pacific Railroad mainline in East Rittenhouse Road and will extend east between Pecos Road and Germann Road to South Meridian Road.

Several properties adjacent to the subject property constitute an environmental risk to the project. These manufacturers are either former (MCG PURE) or current (Fujifilm, Bridgestone, CRM) Resource Conservation and Recovery Act (RCRA) large quantity or small quantity hazardous waste producers. This could be considered an environmental risk, but all of the manufacturers are in compliance with RCRA, and rail is considered a very safe mode of transportation for hazardous waste that they may produce.

Other than the manufacturers supporting this project, there are relatively few landowners not involved with the planning of the project. Most of the land is vacant and unused. This indicates that the risk of substantial change to the environment is relatively low.

The PIRATE Project team has stayed in consistent communication with private property owners along the proposed route, however, due to the accelerated demand for land in this area, new developments and new landowners have emerged that were not initially considered at the start of this project. These new owners and developers posed an additional risk to the project, however, the City of Mesa Office of Economic Development, as well as Union Pacific, has maintained proactive outreach to these new developers and owners to ensure stakeholder buy-in and collaboration. The project team believes these risks to be mitigated with the new property owners in the area, however, this accelerates the need for this project to be constructed imminently, before new entrants emerge in the market with opposing views on rail, and the window of opportunity closes to implement this critical regional initiative.

VII | READY TO BUILD & DESTINED FOR SUCCESS

The PIRATE Project is key to improving Arizona's industrial transportation network. It will remove heavy industrial trucks from roadways and highways, provide critical jobs, and enable economic growth. Multiple private and public entities stand to benefit from this project, and the combination of their letters of support and substantial financial commitments signal the importance of this project to the region.

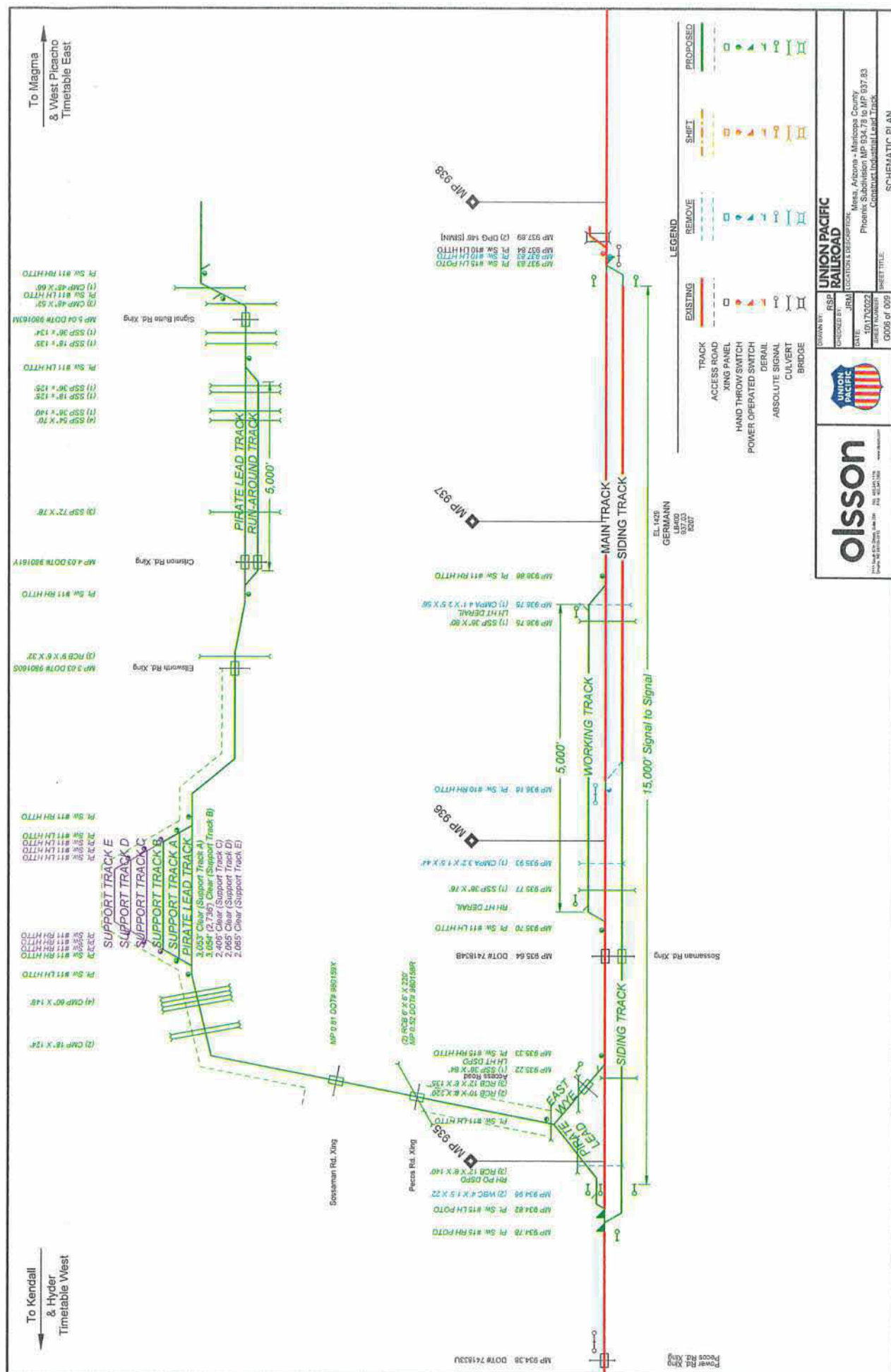
The impressive economic and population growth in Maricopa County has increased the need for transportation infrastructure funding statewide. The businesses currently in the proposed rail extension site have indicated rail access will alleviate the sizable commercial truck traffic that is required to import and export their products.

In addition, the explosive growth in Mesa and the East Valley region from a development perspective has significantly tightened the window of opportunity for this project to be constructed and executed. With over 16.5 million square feet of new development now planned in the area, vacant land within the PAMZ that was selling for just \$2 to \$3 per square foot 18 to 24 months ago, is now selling for as high as \$14 per square foot. This dramatic increase in land prices has significantly raised the overall cost of the PIRATE Project, which makes the award of a 2022 RAISE Grant all the more critical for its success. The time is now to see this project move to completion, which the project team and Union Pacific are confident can be executed as rapidly as 2023, before the pace of development in the area stops PIRATE in its tracks. If PIRATE is not constructed now, this area of one of the fastest-growing Top 50 Most Populated Cities in the Country will become overburdened with truck traffic and congestion, and the chance to have mitigated and solved this critical regional issue will have passed us by, leaving a host of future infrastructure challenges for future generations to come.

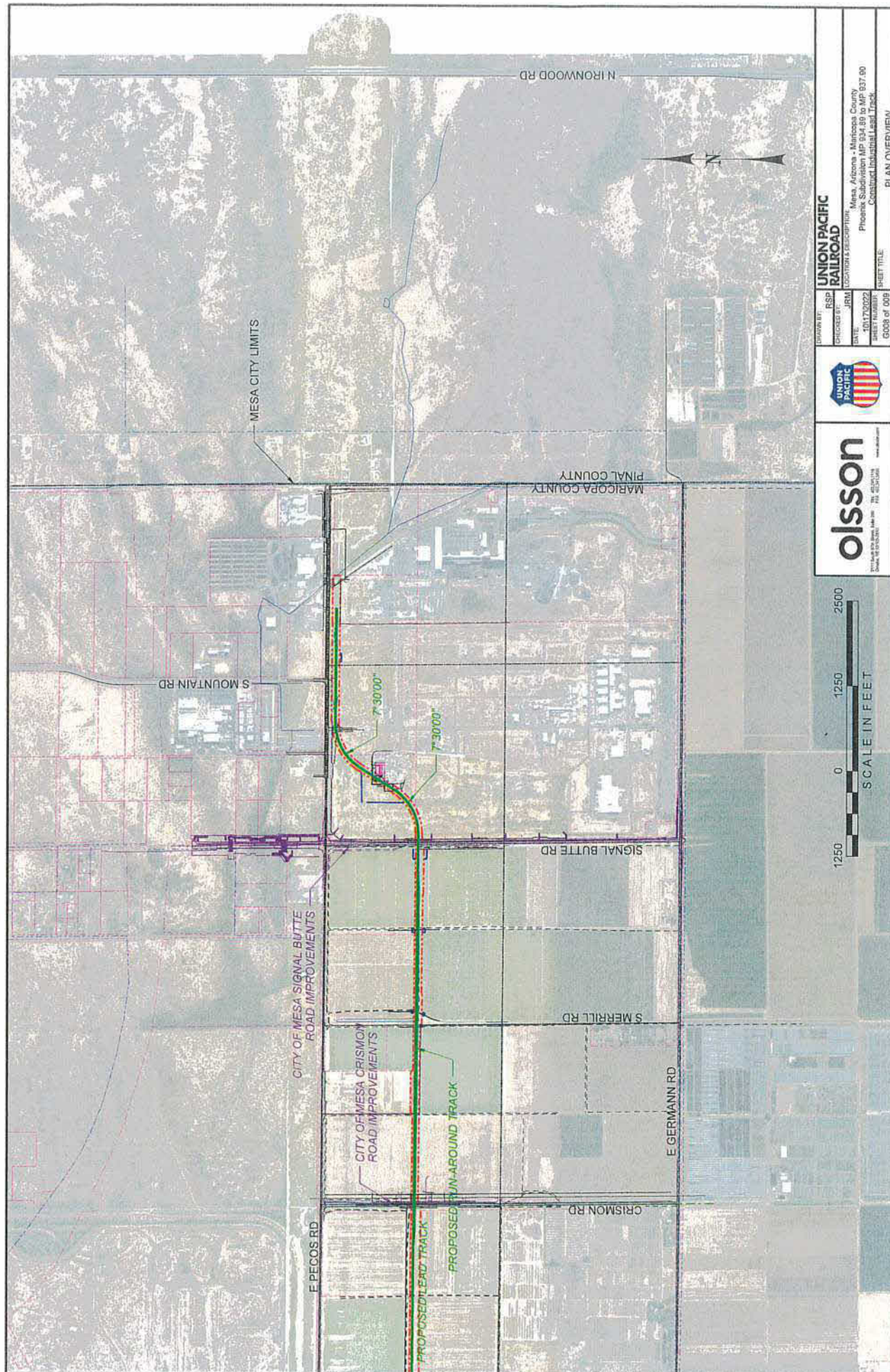
Engineering and economic analysis has shown that the project is feasible, the economic impacts are widespread, and the public benefits substantially exceed the requested grant funding. This project is an excellent opportunity to serve a growing region, increase connectivity to consumers and business supply chains, and support Arizona's growing high-skilled technological manufacturing industries.



EXHIBIT "2"



10/17/2022



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 10/17/2022

LOCATION MAP	RSP
OFFICIALS BY	JRM
DATE	10/17/2022
TIME	10:40 AM
SHEET TITLE	6008 of 608

olsson

3111 S. 48th St., Suite 100, Phoenix, AZ 85040
 Phone: 602.955.1000 Fax: 602.955.1001
 www.olsson.com

UNION PACIFIC RAILROAD

LOCATION & DESCRIPTION: Mesa, Arizona, Maricopa County
 Phoenix Subdivision MP 634.89 to MP 637.89
 Construct Industrial Lead Track

PLAN OVERVIEW

EXHIBIT "3"

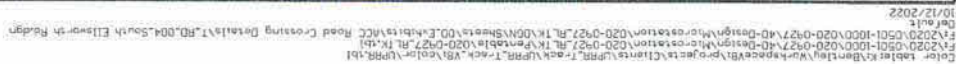


EXHIBIT "4"

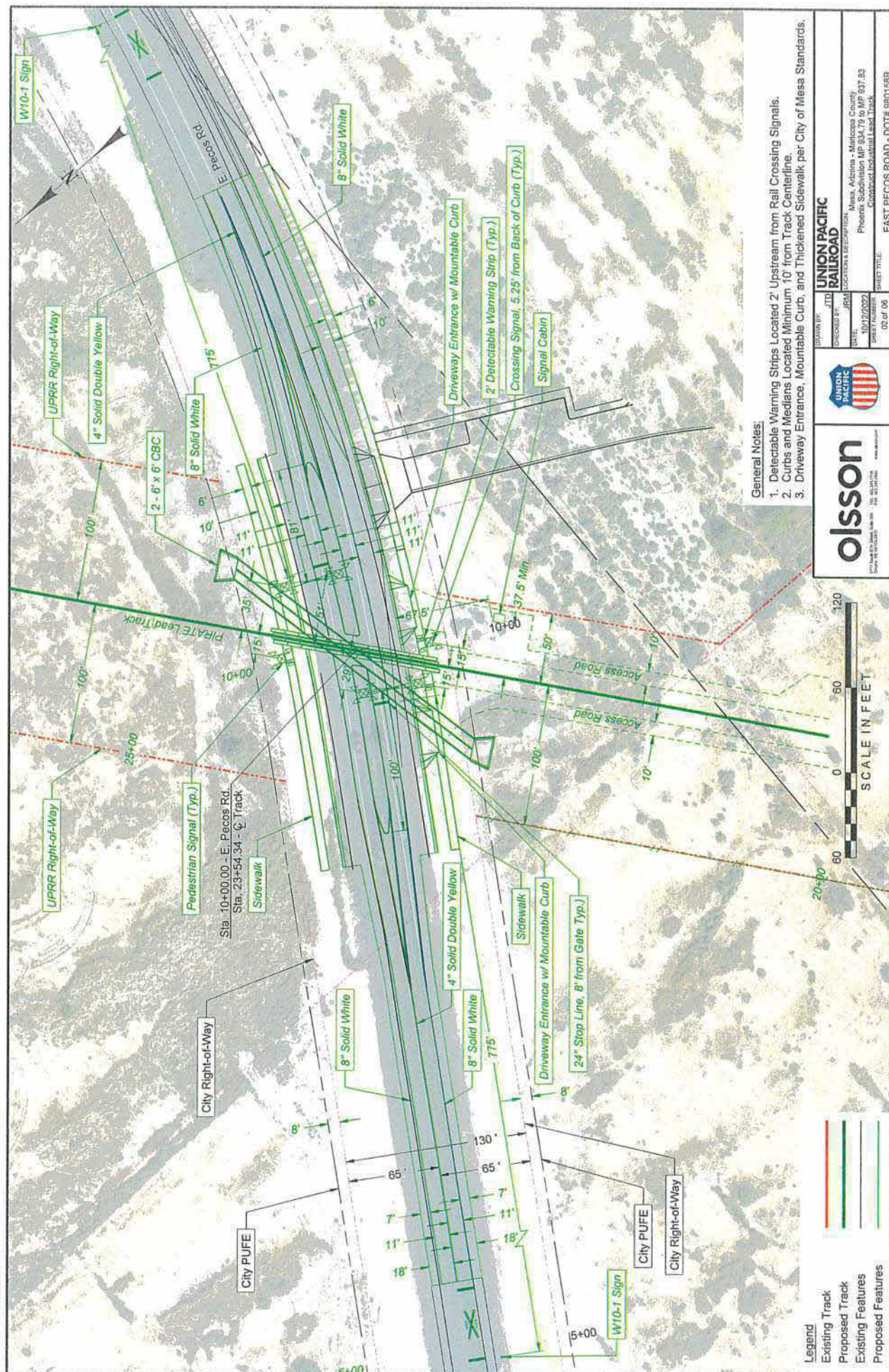


EXHIBIT "5"

EXHIBIT "6"

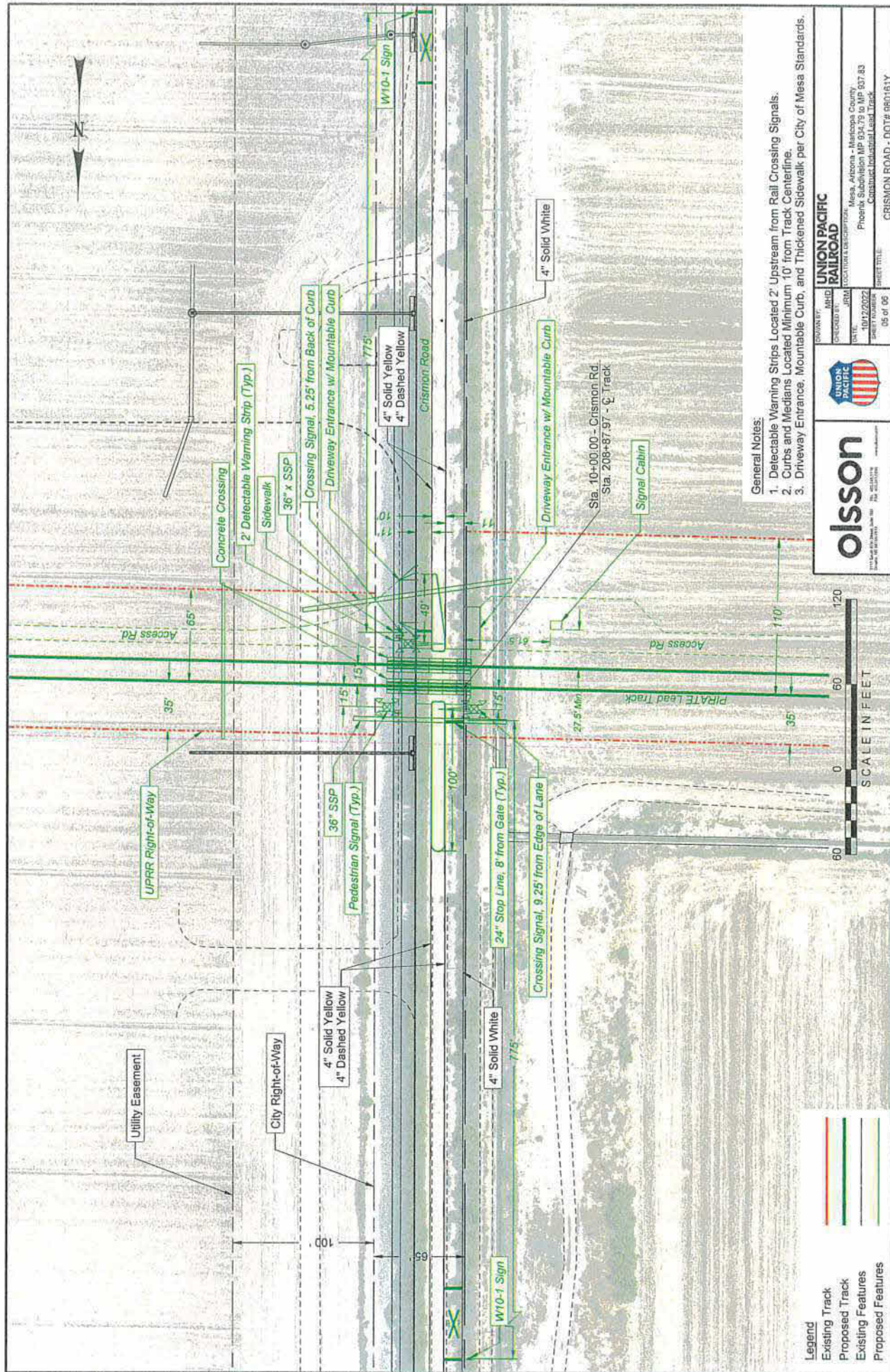


EXHIBIT "7"

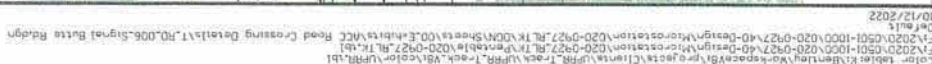
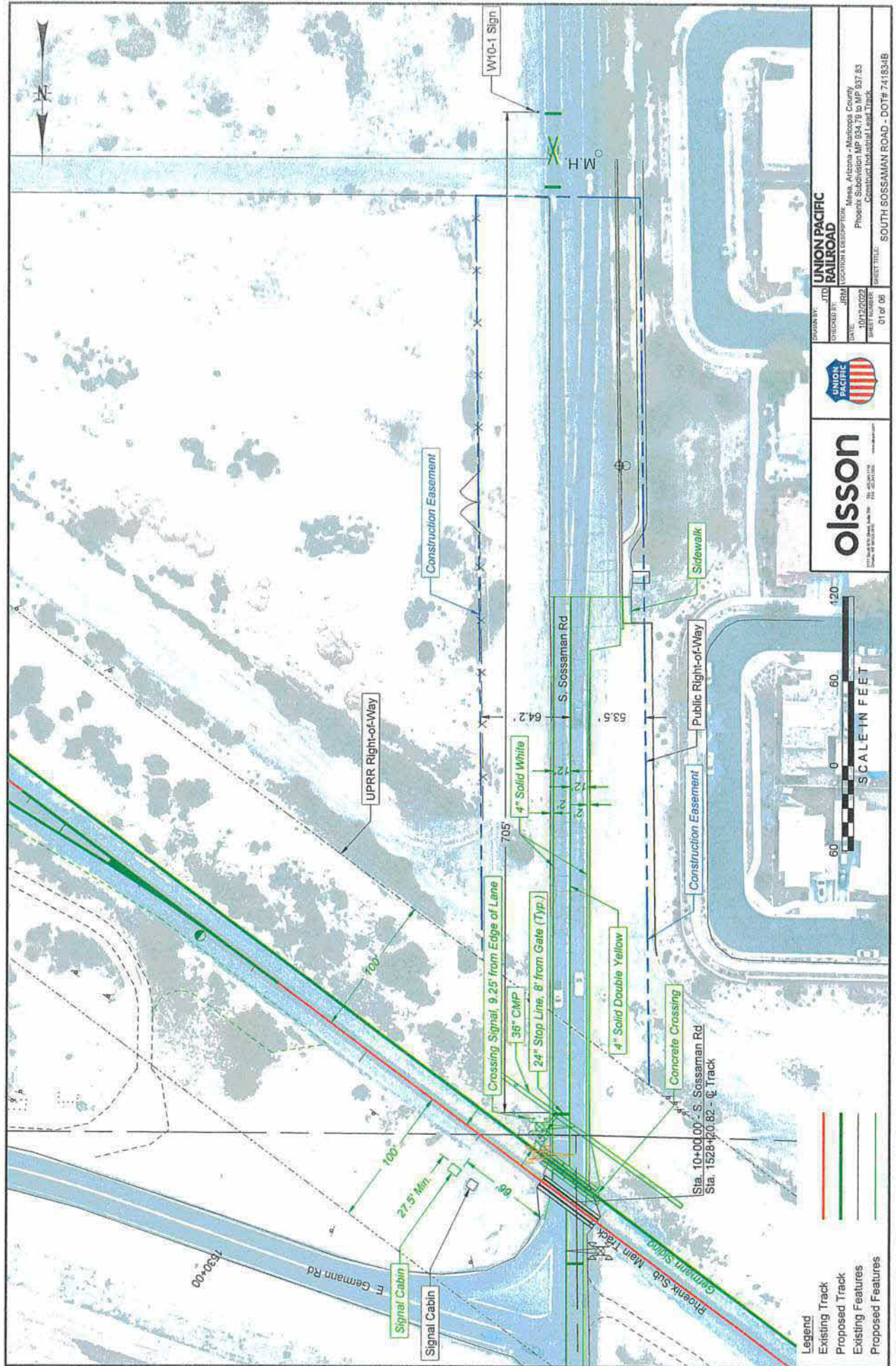


EXHIBIT "8"



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UNION PACIFIC RAILROAD

LOCATION & DESCRIPTION: Mesa, Arizona - Maricopa County
 Project No. MP 233-0000
 Contract Industrial Lead Track

SHEET TITLE: SOUTH SOSSAMAN ROAD - DOT# 741834B

DATE: 10/17/2022

DESIGNED BY: JRM

CHECKED BY: JRM

DATE: 10/17/2022

SHEET NUMBER: 01 of 08

- Legend**
- Existing Track
 - Proposed Track
 - Existing Features
 - Proposed Features

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EXHIBIT “9”

1 **BEFORE THE ARIZONA CORPORATION COMMISSION**

2
3 COMMISSIONERS

4 LEA MARQUEZ PETERSON, Chairwoman
5 JIM O'CONNOR
6 SANDRA KENNEDY
7 JUSTIN OLSON
8 ANNA TOVAR

9 IN THE MATTER OF THE) DOCKET NO. _____
10 APPLICATION OF THE UNION PACIFIC)
11 RAILROAD TO CONSTRUCT FIVE (5)) **DECLARATION OF KEN TOM IN**
12 NEW AT-GRADE CROSSINGS AND) **SUPPORT OF UNION PACIFIC**
13 ALTER ONE (1) EXISTING AT GRADE) **RAILROAD COMPANY'S**
14 CROSSING IN MESA, ARIZONA) **APPLICATION TO CONSTRUCT**
15) **FIVE (5) AT GRADE CROSSINGS**
16) **AND ALTER ONE (1) EXISTING**
17) **AT-GRADE CROSSING IN MESA,**
18) **ARIZONA**

19 I, Ken Tom, being first duly sworn upon his oath, states as follows:

20 1. I am over the age of eighteen, and I have personal knowledge of the facts
21 stated herein.

22 2. I am employed by Union Pacific Railroad Company ("Union Pacific") as the
23 Western States Public Project Manager. I have responsibility for public projects the State
24 of Arizona, and am involved in the PIRATE project, which is the subject of Union Pacific's
25 current Application.

26 3. In recent years, the public's demand for rail freight service to, from and
through Arizona, and in the Southwest generally, has grown steadily and dramatically.

1 Union Pacific anticipates that the public's demand for rail freight services will continue to
2 grow in Arizona.

3 4. To meet this growing public demand for movement of freight by rail, Union
4 Pacific, along with relevant municipal, business and industry leaders, determined that the
5 PIRATE Line would provide significant economic benefits to the East Valley region by
6 connecting the East Valley to Union Pacific's rail system and the United States' National
7 Rail Network.
8

9 5. The addition of the PIRATE Line will allow for the expeditious movement of
10 freight by rail through the East Valley, and through the State of Arizona.
11

12 6. Five (5) new at-grade railroad crossings will be constructed as part of the
13 PIRATE Line Project. (See, Exhibits 1 through 7 to Union Pacific's Application, submitted
14 herewith). One (1) existing public at-grade crossing will be upgraded as part of the
15 PIRATE Line Project. (See, Exhibit 8 to Union Pacific's Application, submitted herewith).
16 The traffic delays associated with these new and upgraded crossings will be minimal
17 because Union Pacific 1) only has current plans for one train each direction per weekday;
18 and 2) does not plan on conducting regular switching operations over the proposed or
19 existing crossings. The proposed PIRATE Line will also take a significant amount of
20 truckloads off of City of Mesa streets each year by providing East Valley industries the
21 opportunity to transport their materials and products via rail.
22

23 7. Specifically, Union Pacific seeks authority to construct five (5) new at-grade
24 crossings in the City of Mesa, and improve one (1) existing crossing where public
25 roadways would intersect at grade with Union Pacific's proposed PIRATE Line. The new
26

1 crossings would intersect Sossaman, Pecos, Ellsworth, Crismon and Signal Butte Roads.
2 The proposed improvements to these new at-grade crossings have been evaluated by a
3 diagnostic team consisting of Union Pacific, the Arizona Corporation Commission's
4 Railroad Safety Staff, and the City of Mesa, which is the controlling roadway authority.
5

6 8. As part of the PIRATE Line Project, Union Pacific proposes modifying one
7 (1) existing at-grade crossing at Sossaman Road (DOT No. 741-834B). The proposed
8 modifications to Sossaman Road will enhance safety at the existing at-grade crossing by
9 incorporating the most current industry at-grade standard safety devices into the crossing.
10 Union Pacific will also be incorporating state-of-the-art at-grade crossing technology at
11 each of the five (5) new proposed crossing in Union Pacific's Application.
12

13 9. Enclosed with Union Pacific's Application, and incorporated by reference
14 here, are eight (8) Exhibits, one for each of the six (6) crossings affected by this
15 Application, identified by the names of the crossings: Ellsworth Road, DOT No. 980-160S;
16 Pecos Road, DOT No. 980-158R; Sossaman Road, DOT 980-159X; Crismon Road, DOT
17 No. 980-161Y; Signal Butte Road (DOT No. 980-163M); and Sossaman Road (existing),
18 DOT No. 741-834B. These Exhibits contain the at-grade crossing improvements proposed
19 by Union Pacific. The remaining two (2) exhibits contain additional information regarding
20 the PIRATE Line generally.
21

22 10. Union Pacific will bear the cost of all improvements to be made at the
23 crossings affected by this Application.
24

DocuSigned by:

Kenneth Tom

B01421617E0B456...

Ken Tom

Western States Public Projects Manager
Union Pacific Railroad Company

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